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ABSTRACT

These proceedings contain the texts of 13 papers presented at a conference devoted to the development and use of employer surveys at the local level. Focus of the first paper is on using local employer surveys for Comprehensive Employment and Training Act (CETA) planning and determination of private sector employment and training needs. Examined next is the significance of local employer surveys in a comprehensive occupational information system. In four papers on federal and state agency perspectives on employer surveys the following topics are covered: the viewpoint of the National Occupational Information Coordinating Committee on employer surveys; the Occupational Employment Statistics Program and CETA planning information requirements; and programs and products that are available from the Division of Employment Security. The final seven papers address various recent state and local experiences in the design and use of local employer surveys, including the role of establishment survey in the policy formulation process; the New Hampshire Balance of State Employer Survey; and methodology and sample selection for a survey of private sector firms that utilize part-time employment. Also included are two discussions of employer survey conferences. (MN)

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Issues Related to the Development and Use of Employer Surveys at the Local Level

Proceedings of the Employer Survey Conferences Held February 13, 1980 and April 10, 1980

Edited by:
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Irwin L. Herrnstadt
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Sponsored by:
Center for Labor Market Studies
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and
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ISSUES RELATED TO THE DEVELOPMENT AND USE OF EMPLOYER SURVEYS AT THE LOCAL LEVEL

Proceedings of the
Employer Survey Conferences
Held February 13, 1980 and April 10, 1980

With Introduction by:
Irwin L. Herrnstadt

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August, 1981

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The publication of this volume was made possible through the efforts and cooperation of a number of individuals within the employment and training system in New England who are keenly interested in the improvement of labor market information used in the policymaking and planning process of the CETA system.

Each of the authors of the 13 papers included in this volume deserve our gratitude for providing well organized and thoughtful discussions of their conference presentations for inclusion in this volume. In addition, the conference discussants Edward Meehan of CLMS and Robert Vinson of the Massachusetts Department of Manpower Development are to be thanked for preparing a set of comments related to several themes voiced during both conferences.

A debt of gratitude is owed Stuart Tischler, former director of the Massachusetts Occupational Information Coordinating Committee for his cooperation in co-sponsoring one of the conferences and in his support for this publication.

The publication of this volume also required a substantial amount of time and effort to be devoted to obtaining the papers included in the volume, making editorial changes, typing portions of the volume, organizing the contents of the volume and designing its cover. Mary McCarthy deserves our special thanks for the time and effort she contributed to the above tasks. The tireless efforts of Sheila Palma, her patience and enthusiasm for the publication of this volume need also to be recognized. In the absence of Ms. Palma's considerable skills these proceedings could not have been published.

The papers in this volume present a useful review of a variety of issues related to the design implementation and use of employer surveys at the local level. It is our hope that the dissemination of the papers included in this volume to employment and training planning and management staff can assist them in the development and use of labor market information that can aid in the employment and training program planning and decision making process. We regret that four of the papers presented at these conferences were not made available to the editors and therefore are not included in this volume.

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INTRODUCTION

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In the spring and summer of 1979, members of the Northeastern University (NU) Center for Labor Market Studies (CLMS) and the NU Institutional Grant (IG) examined the implementation of the Private Sector Initiatives Program (PSIP) in New England. Interviews were held in the field with representatives of the 25 prime sponsors in the Region, as well as with staff and members of Private Industry Councils (PICs). One of the discoveries of this field work was the rebirth of the employer survey as a consequence of the Sections 703 and 705 of the 1978 CETA Reauthorization.

This finding, as well as requests for technical assistance, prompted two conferences on the subject of employer surveys, planned with the help of the Regional Office (RO) of the Employment and Training Administration (ETA). The first survey, sponsored by the CLMS and the Massachusetts Occupational Information Coordinating Committee (MOICC), was held in February 1980 for members of the Employment and Training (E & T) community in Massachusetts, and the second, sponsored by the CLMS alone, two months later in April, for members of the E & T community throughout the Region.

The CLMS and IG saw the two conferences as opportunities for the mutual sharing of experiences and knowledge. For its part, the CLMS-IG wanted to better understand the activities being undertaken by practitioners and to share its expertise in the art of surveys with those responsible for conducting them and using their findings. Moreover, the CLMS-IG wanted to disseminate this information to as many members of the regional E & T systems as possible. The contribution of the CLMS-IG, which has more than a cursory concern about the integrity of the Labor Market Information

(LMI) and E & T planning systems, had another very specific purpose: to ensure that employer surveys would be methodologically sound, and thus yield useful results and avoid the fate of the discredited Area Skill Survey.

The papers in this volume are the fruits of these various collaborations and represent the thinking and experiences of staff and members of a large number of actors in the Region's E & T system, including the regional ETA, the regional BLS, local PICs, State Employment Security Systems (SESAs), the MOICC, prime sponsors and finally NU's CLMS and IG. Reflecting the CLMS-IG principle that academicians and practitioners have much to learn from each other, seven of the papers are by individuals who are responsible for conducting local employer surveys used for local planning purposes.

Five topics were covered in the conferences. The first was the legislative and operational LMI setting in which the employer survey had a place (Andrew Sum, CLMS Director and IG Associate Director). The second was the technical "nuts and bolts" for the proper design and implementation of these surveys (Paul Harrington, now one of the CLMS-IG staff and formerly with the BLS). The third was official and unoffical sanctions of employer surveys (Ray Poet and Robert D'Alessandro, both of the regional ETA, Daryl Delano of the regional BLS, and Jim Woods of the National Occupational Coordination Committee). The fourth was a discussion of funding prospects for PSIP (Maureen McLaughlin from the Congressional Budget Office). The fifth was the experiences and suggestions of practitioners and academicians who had conducted surveys (Gregg Philips of the Worcester Prime Sponsor; Paul Vigeant of Jobs for Fall River; Howard Wisniowski of the Hampden County, Massachusetts, Consortium; Clay Hall of the Pittsfield, Massachusetts, Consortium; Richard Hurd from the University of New Hampshire; Robert Sherlock of the Penobscot, Maine, Employment and Training Consortium; Jeremy Ingpen, now with the New England Board of Higher Education, and formerly with the Vermont SESA and Kim Kennedy, with the Massachusetts Department of Manpower Development). The receptivity of two regional SESA research directors also was expressed (Betsey Munzer and Ray Fongemie from the respective SESAs of Massachusetts and Maine).

A few observations can be drawn from the proceedings of the two conferences. One is that the local employer survey fills an important gap in an operational LMI and planning system. A second is that the local survey cannot be duplicated by more distant regional or national agencies. A properly designed and executed survey can provide more than short run forecasts of occupational needs in a local area; it can also provide information about local employer hiring policies and standards, essential knowledge for rendering realistic training, and effective job development and placement services. The local employer survey can be adapted to the diverse characteristics of local labor markets and thus offers the opportunity to local E & T agencies to obtain answers to the specific questions. As one of the speakers noted, a survey can have either an analytical or operational goal, each with different technical requirements. The latter goal can reflect the unique needs of local planners and the unique attributes of their local economies, so that employment and training efforts are realistically tailored to the characteristics of the local labor market.

If a third conference on employer surveys can be held, it is hoped that the uses of the findings of such surveys will participate, especially vocational educators and prime sponsor program operators. They can contribute much about the value of the surveys and about useful modifications.

Section One: ROLE OF EMPLOYER SURVEYS IN A LABOR MARKET AND OCCUPATIONAL INFORMATION SYSTEM

CETA Planning and Private Sector Employment and Training Needs: The Uses and Design of Local Employer Surveys

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and

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April 1980

The Private Sector Initiatives Program (PSIP), passed as part of the 1978 CETA Amendments and reauthorized again in 1980, was intended to accomplish the goal of more effectively linking the existing CETA employment and training system to the private sector by incorporating the insights and expertise of the private sector into the local CETA program planning process. Under Title VII of CETA, Private Industry Councils (PICs) composed largely of individuals from the small business community were established. PIC's were to be heavily involved in the planning, design, and operation of programs under Title VII, with PIC's sharing the responsibility for both the development and approval of such programs with the prime sponsor.

To achieve their overall objectives, PIC's were given major responsibility by Congress for identifying private sector employment and training needs. In short, PICs were expected to provide the information needed to target employment and training programs at the private sector. The types of responsibilities that PICs were assigned under the law include the following:

- Identify and analyze available private sector job opportunities by industry, occupation and location.
- Provide labor market information for use by prime sponsors in development of their employment and training activities outside of Title VII.
- Select occupational areas for funding under Title VII classroom skills training, upgrading, retraining and OJT programs.

- Design or assist in the design of curriculum for skills training programs and solicit private sector involvement in the planning and design of such programs.
- Encourage employers to develop job skill requirement forecasts and to coordinate such forecasts with prime sponsors.
- Utilize employment generating services monies to market CETA, OJT, and Targetted Jobs Tax Credit programs under Title II B as well as Title VII.

In examining these information mandates of PIC's, it is clear that all these activities involve either the generation of new labor market information, the dissemination of existing labor market information, or the utilization of existing LMI in the planning and marketing of programs.

The CETA Title VII legislation has clearly delegated major responsibilities to PIC's that place an additional emphasis upon the development and use of labor market and occupational information within the CETA prime sponsor planning process.

Availability of Existing LMI Sources of Assist PIC's

Currently the existing federal-state cooperative statistical programs, operated by State Employment Security Agencies in cooperation with the U.S. Department of Labor, provide a wide variety of labor market information useful in assisting PIC's in meeting their information responsibilities under PSIP. Data related to industry employment, occupational employment, labor turnover and accessions, current job openings, and industry and occupational employment projections are currently produced by the existing LMI system.

Industry employment data are produced by two major data collection programs at the state level. The Current Employment Statistics (CES) programs provide current monthly estimates of nonagricultural wage and salary employment by major one and two digit SIC industries statewide and for a limited number of major labor areas. Major stengths of this program include its ability to provide current estimates of employment levels as well as information on recent employment developments on a statewide basis. The CETA program is, however, limited in its ability to provide a substantial degree of industry and geographic detail.

The ES-202 system, which is also operative in each state, provides information on wage and salary employment in all establishments covered by federal and state unemployment insurance laws (about 98% of total wage and salary employment). Industry employment data derived from the ES-202 system provide very detailed information on the industrial structure of employment at the state and sub-state level. In addition, establishment listings that identify the name and address of employers by industry and employment size class are also available from this program.

Occupational employment data are produced on a statewide basis under the Occupational Employment Statistics (OES) survey program. the OES survey is designed to produce information on occupational staffing patterns by industry largely on a statewide basis. Information on occupational employment by industry is updated once every three years through an employer-based survey. Currently, little sub-state information is produced by the survey although the capability exists to make on-going occupational employment estimates for sub-state areas.

Monthly data on accessions and separations in manufacturing, mining, and telecommunications industries, including new hires, recalls, quits, layoffs, fires, etc., are produced under the federal-state Labor Turnover Survey (CTS) program. Data derived from this survey have primarily been employed at the national level as an economic indicator. Its limited industry coverage and absence of occupational detail reduce its usefulness for employment and training program planning purposes.

Estimates of total hires, new hires, and separations are available in some states by detailed industry on a statewide and sub-state basis from data collected under the Employment Service Potential (ESP) project. These data are believed to be quite useful in providing assistance to those responsible for both job placement and marketing aspects of employment and training programs. Data derived from the ESP project, however, lack occupational detail and are not always available in a timely fashion.

Data on the level and occupational and industrial composition of current job openings are a highly desirable type of information for use in identifying private sector job opportunities. Unfortunately, no comprehensive data collection effort exists that can provide such information even on a national basis. Currently, some job openings information is available from the operations of the SESA Job Bank program. Job Bank job openings data provide information on some unknown faction of total job openings in an area, including information on the occupational and industrial characteristics of such vacancies as well as associated wages, hours of work, and hiring requirements.

Projections of future employment levels by industry and occupation as well as estimates of the annual average number of job openings by occupation are produced for the states and major substate levels by SESA's once every two to three years. The State and Area Projections Program (SAPP) utilizes data from the OES program on occupational employment (along with data from the decennial census) to project future employment requirements. Data related to replacement needs are derived from actuarially based working life tables and combined with the projections of growth to produce estimates of annual average job openings. Data derived from the SAPP program are limited in that the accuracy of the projections are unknown.

Alternative Uses of Local Employer-Based Surveys

The preceding section of this paper provided a listing and description of available sources of labor market information that would likely prove to be quite useful to CETA prime sponsors and to Private Industry Councils in planning job training programs at the local level.[1] These data sources could be used to provide information on the industrial structure of local economies, trends in the growth or decline of employment within state and local industries, the occupational employment structure of industries within states, projected employment opportunities by industry and occupation in state and major local labor areas, hiring and labor turnover rates for selected industries, and the numbers and occupational characteristics of job orders placed by private sector firms and public agencies with the Job Service in state and local areas.

The above information would substantially assist Private Industry Councils in carrying out their official responsibilities of identifying employment opportunities by industry, occupation, and geographic location. In addition to these responsibilities, however, PIC's were also expected to provide labor market information for use in the planning of all local CETA employment and training programs and to assist in the selection, design, and operation of specific training programs administered under the act.[2] To carry out these responsibilities in a comprehensive and effective manner, PIC's will likely have to supplement existing labor market and occupational information through the use of local employer surveys. Such surveys can be used to provide additional information on a number of issues that are critical to the planning, design, and administration of effective job training programs.

Among the potential uses of local employer surveys are those of obtaining information on the nature and structure of the internal labor markets of local firms; the number and occupational characteristics of existing job vacancies in local labor markets; the hiring practices and policies of local firms; the hourly and/or weekly wages and annual earnings of workers in specific occupations; the training and promotional policies of local firms; and employer attitudes toward existing employment and training programs funded by the local CETA prime sponsor and other local employment and training agencies. A more detailed discussion of each of these alternative uses of employer surveys is presented below.

Internal Labor Markets and Entry-Level Occupations

In planning occupationally-oriented training programs under Titles II B and VII of CETA, prime sponsors and the PIC's should have knowledge of the nature and the structure of the internal labor markets of firms hiring workers in occupational areas being considered for training. The internal labor market has been defined as "an administrative unit, such as a manufacturing plant, within which the pricing and allocation of labor is governed by a set of administrative rules and procedures."[3] The jobs within an economic establishment's internal labor market consist of entry-level jobs, or ports of entry, which are open to persons outside the enterprise ("outsiders") and those jobs tied to internal career ladders that are filled by the movement (promotion or transfer) of incumbent employees ("insiders").[4] Knowledge of the specific occupations that comprise the ports of entry within local establishments and their linkages with other jobs in the establishment is a critical input into the selection of occupational areas for training. Graduates of CETA-funded classroom training programs will potentially be able to gain access only into those jobs that serve as ports of entry into local firms, and the future earnings of workers placed into unsubsidized entry-level jobs will be influenced in part by the nature and closeness of the ties between these entry-level jobs and other positions within the internal labor market.

Information on the structure of the internal labor markets of local establishments cannot be obtained from any of the data sources described in the previous section of this report. The data appearing in industry-occupation matrices based on the census and OES surveys can be utilized to provide insights into the relative importance of various occupations in different industries; however, by themselves, they cannot be used to identify those occupations that serve as ports of entry into establishments in each industry and those occupations that are filled by the promotion or transfer of incumbent employees. The data produced by existing occupational employment projections programs for states and major local labor areas provide estimates of the annual average number of projected job openings in an occupation due to growth and replacement, but do not indicate whether these projected openings will be available to persons outside the firm.

Local employer surveys can be designed to gain insights into the nature and structure of the internal labor markets of local firms and thereby supplement the information available from existing data sources. These surveys can be used in part to obtain information on the occupations that comprise the ports of entry into firms within various local industries and the nature of the linkages between these occupations and other jobs within these establishments. Knowledge of those entry-level jobs that pay relatively low wages and lack promotion potential could also potentially be useful in the planning of worker upgrading programs under Title II C and VII of CETA. Such employer surveys would not be comprehensive in their coverage, but instead would be focused upon particular local growth industries or specific occupations within local labor markets that are characterized by above average numbers of projected job openings.

Job Vacancy Data

Comprehensive data on the numbers and the industrial and occupational characteristics of current job openings in local labor markets would be useful for program planning purposes to CETA prime sponsors and Private Industry Councils in a number of different ways.[5] Data on the number of current job openings by occupation could be utilized together with data on the numbers of unemployed workers by occupation to identify occupational areas characterized by current shortages in the local labor market.[6] Some of these occupations would be desirable candidates for the provision of classroom training under Title II B and VII programs.[7] If CETA prime sponsors and the PIC's could identify such shortage occupations and design and administer training programs that would successfully prepare existing unemployed and economically disadvantaged persons for employment in such occupations, they would simultaneously meet the needs of private sector employers and the unemployed and have a favorable net impact upon the level of unemployment in their communities.

The only source of data on current job openings that is available in all states throughout the nation is that of the job listings appearing on the Job Banks of the State Employment Security Agencies. These data are, however, characterized by a number of shortcomings that limit their current usefulness for CETA program planning purposes. The job orders placed with the Job Service by private sector firms and public agencies have been estimated to account for only a relatively small proportion (10-15%) of total job openings, and this ratio tends to vary by industry and occupation within states.[8] Thus, unfilled job openings appearing on the Job Banks of the SESA's cannot be reliably utilized to identify occupational shortages in most local labor areas.

Currently, pilot job vacancy surveys designed by the Bureau of Labor Statistics are being administerd in four states throughout the nation (Florida, Massachusetts, Texas, and Utah). These pilot job vacancy surveys are designed to test the feasibility of collecting reliable data on current job openings from employers to allow for the estimation of the numbers and rates of job openings in selected industry groups and occupations on a statewide basis.[9] The findings of these pilot job vacancy surveys are currently being reviewed by the Bureau of Labor Statistics and will be used to develop recommendations for the Congress with respect to the desirability of funding such surveys on a national basis.

Prime sponsors and PIC's may find it desirable to conduct local employer surveys designed to estimate the numbers and occupational characteristics of current job openings in local labor markets. Such surveys would likely best be focused upon subsets of local industries characterized by recent above average rates of growth in employment and by staffing patterns containing occupations that have substantive skill requirements for which training can be provided by CETA participants in a reasonable period of time (4-12 months). Such job openings surveys would not only attempt to estimate the number of current job openings in selected occupations and industries, but would also be designed to capture information on the durations of such job openings, the factors responsible for their existence (turnover, lack of qualified skilled applicants, etc.), and the employers' perceptions of the likelihood of such openings continuing in the foreseeable future. CETA-related training decisions should be based not only upon the availability of current job openings in an occupation, but also upon knowledge of the ability of training programs to successfully prepare CETA-eligible individuals for such jobs and the likelihood of such jobs being open to graduates upon the completion of the program.[10]

Hiring Policies and Practices of Local Firms

Among the types of information needed by CETA prime sponsors and the PIC's to properly design and administer occupationally-oriented classroom training programs and to successfully develop OJT slots for CETA-eligible individuals is that of the hiring policies and practices of local firms. Knowledge of the actual hiring practices of local firms for workers in specific occupations being considered for training would be particularly useful in the design of appropriate curriculum for such training courses. Paul Barton has effectively argued the case for such information in the following manner:

> "The process of deciding on an appropriate vocational education curriculum ought to be carried out on the basis of how employers hire and train in particular industries in a particular community... these are matters that can be determined by asking employers what their practices are, what they want them to be, and whether it makes sense to change them."[11]

None of the labor market data sources described in the previous section of this report provide information on the hiring practices and policies of local firms.[12] To obtain occupation specific information on such hiring practices and policies, local CETA prime sponsors and PIC's will likely have to administer their own employer-based surveys.[13] Available data on local industry employment and occupational staffing patterns of industries will, however, prove highly useful to CETA prime sponsors and PIC's in their efforts to design and administer such surveys. Further details on the specific uses of these local data sources in designing employer-based surveys will be provided in later sections of this paper.

Local employer surveys can be designed to collect a wide variety of information on the hiring requirements of local firms for particular occupations and the sources of labor supply utilized by various local firms in securing their needed manpower in those same occupations. (An example of the type of interview questionnaire that is needed to collect such hiring and labor supply information is presented in Appendix A of this paper). Knowledge of the formal education, experience, and specific skill requirements of particular occupations as well as personality traits, test scores, licensing, and other requirements of local employers would be useful in determining the appropriate curriculum content of classroom training programs under Titles II B and VII of CETA. This information would also assist in developing appropriate criteria for the selection of CETA-eligible individuals for participation in such programs. Detailed local employer input into the planning and design of occupationally-oriented classroom training programs, as occurred at times under the Skills Training Improvement Programs (STIP), should assist in improving the overall placement performance of such programs.

In addition to obtaining information on the actual hiring practices and policies of local firms, employer-based surveys can also be used to generate information on the actual sources of labor supply utilized by local employers to secure needed manpower in occupational areas being considered for funding by the local CETA prime sponsor and/or the PIC. The usefulness of such information in the planning of local employment and training programs has been recently highlighted by Marcia Freedman and Anna Dutka:

> "The felt needs of employers can best be deduced from what they do rather than what they say, including not only the training programs they offer, but the sources they use to recruit new workers. By "sources," ... we mean the source of the worker's training (if any) for example, a vocational school, the armed forces, prior experience, etc. Among other things, the planner must know what the competition is -- which existing programs are supplying workers and where a proposed new program will fit in."[14]

Information on the sources of labor supply by occupation to local employers can be collected simultaneously with the information on hiring requirements. In fact, the interview findings in each of these two areas of employer behavior will likely be useful in shedding insights on the other area. For example, knowledge of the firm's hiring requirements will likely assist in understanding the sources of labor supply that it relies upon to fulfill its manpower needs. An understanding of the alternative sources of supply used by local firms to meet their manpower needs in different occupations and knowledge of the variations in these sources of supply by industry and employment size of local firms would contribute in a substantive way to the development of a truly comprehensive occupational information system at the local level. The information on internal labor markets and entry-level occupations, hiring practices and policies, and sources of labor supply of local firms could be used to produce comprehensive inventories of local entry-level jobs and the avenues to employment in such occupations and industries for use in the counseling of current and future jobseekers in state and local labor markets.[15]

Information on Hourly Wages and Hours of Work by Occupation

Among the key characteristics of occupations that should be taken into consideration by local CETA prime sponsors and PIC's in selecting occupational areas for training are their prevailing hourly wages and weekly hours of work. In the 1978 reauthorization of the CETA legislation, Congress declared that the employment and training services provided to participants under the Act should lead to an increase in their earned incomes and assist them in becoming economically self-sufficient.[16] In order to determine the earned income potential of particular occupations in local labor areas, CETA prime sponsors must have access to information on their hourly wages, the weekly hours of work that they provide, and their employment stability. The employment stability of jobs can be measured by the number of weeks of employment that they can potentially provide to jobholders during the year; i.e., whether they provide year-round employment (50-52 weeks) or only part-year employment due to seasonality factors.

There are several local data sources available that provide some information on the hourly or weekly wages of workers in particular occupations, including SESA Job Bank data and Bureau of Labor Statistics Area Wage Surveys.[17] The available data sources on wages of workers in specific occupations tend to suffer from a number of shortcomings, including their limited occupational coverage and their frequent lack of representativeness. Local employer surveys can be designed to provide estimates of the hourly and/or weekly wages of workers in specific occupations in local labor areas. These surveys would best be targetted upon those occupational areas which are being considered for funding by the CETA prime sponsor or the PIC.

The employer survey should attempt to capture information on the starting hourly and/or weekly wages (no previous experience) for workers in an occupation, the average wages being earned by workers in these occupations, and the maximum wages that workers can earn in this occupation. (See page 1 of the questionnaire in Appendix A of this paper.) Data on the weekly hours of work in the occupation should also be collected during the survey as well as data on the typical employment stability of these jobs. The wage and hours data for each occupation should be analyzed to determine the variations in wages paid to workers among local industries and among firms of different employment size classes within a given major industry group.[18] Knowledge of these local interindustry and interfirm wage and earnings differentials for given occupations would be useful in guiding the development of OJT contracts for CETA-eligible individuals and the job placement process for graduates of future classroom training programs in these occupational areas.

Training Policies of Local Firms: Internal Promotion Opportunities for Workers

For many jobs in the American economy, skills are acquired by the worker in the post-hiring period through the provision of informal and structured on-the-job training.[19] Given the importance of such post-employment training in developing the skills of workers, knowledge of the training policies and practices of local firms should be used to provide key inputs into the training decisions of local CETA prime sponsors and PIC's. The information on local firms' training policies could be utilized together with information on their hiring requirements for specific occupations to determine the appropriate curriculum content of classroom training programs. The types of skills (including general education skills and positive work habits, as well as specific vocational skills) taught to training program participants within the classroom should be based to a major extent upon local employers' training needs and practices. What is needed is information on local employers' perceptions of the types of skills that workers need to bring with them to the job to perform in a satisfactory manner and information on the types of skills that they (employers) will impart to the workers through informal and structured OJT.

Knowledge of the training practices and policies of local employers can be obtained through the use of well-designed local employer surveys. Such surveys should ideally be focused upon a relatively small subset of occupations being considered for training (10-20 occupations) rather than upon a substantial number of different occupations in the local economy.[20] The information collected through such surveys can be used not only by CETA prime sponsors and PIC's to select occupational areas in which training will be provided, but also to provide career counseling and guidance to current and future jobseekers in local labor markets. As Howard Rosen has recently noted:

> "Prospective workers also need information, particularly where acquiring training is dependent on acquiring a job. Especially in these cases, they need information not only about job openings, but also about the screening criteria and the training practices of local companies."[21]

In selecting occupational areas for training, local CETA prime sponsors and PIC's should take into consideration not only the beginning weekly wages paid to workers in specific entry-level occupations, but also the degree and nature of internal promotion opportunities available to workers in those occupations. Knowledge of the internal labor markets of local establishments should provide insights into the nature of internal career ladders and the types of promotion opportunities available to workers in various entry-level occupations. The future earnings of workers in these entry-level occupations will be dependent not only upon annual wage increases for these jobs, but also upon the opportunities available to such workers to move into higher job classifications within the firm over their working lives.[22]

Local employer surveys can be designed to collect information on the degree and nature of promotional opportunities available to workers in various entry-level occupations within local firms. The survey questionnaire can be structured in a manner to solicit information on the types of occupations into which entry-level jobholders can be promoted, the nature of the promotion process (including the roles of seniority and job performance in determining who gets promoted), and the likelihood and frequency of promotions of entry-level workers. The findings of such surveys should be able to provide useful insights into variations in promotion opportunities for workers in different occupations and in different industries in local labor areas.[23] The findings on promotion opportunities can then be utilized together with other information on hiring requirements, training policies, beginning wages, and employment stability of entry-level occupations in determining those occupational areas in which to invest training monies to achieve the long-term goals and objectives of the local CETA system.

Other Uses of Local Employer Surveys

Local employer surveys can be used by CETA prime sponsors and Private Industry Councils for a number of purposes in addition to those discussed above. Private Industry Councils may desire to survey local employers to obtain their views on the local CETA employment and training system. Marketing-related surveys may be funded out of Title VII employment generating services monies to obtain information on local firms' awareness of existing CETA services, their current use of those services, and their interest in obtaining further information on the availability of CETA employment and training services.[24] Other employer surveys may be designed to obtain local firms' assessments of the quality and effectiveness of CETA services that they received in the past as well as those provided by other employment and training agencies, including public vocational education agencies and private training schools. This information could be utilized to provide recommendations for improving the effectiveness of local CETA employment and training programs and to develop an information base on local programs of "demonstrated effectiveness" for use in funding future CETA Title II B, II C, and VII programs.

As the above discussions have revealed, there are a wide variety of potential uses of local employer surveys by CETA prime sponsors and Private Industry Councils. The local employer survey can be designed to achieve analytical as well as operational objectives; however, it should be emphasized that these various objectives may conflict with one another. Thus, it is highly unlikely that any one employer survey can achieve all of the above potential objectives.

Issues Related to the Design of Local Employer Surveys

The previous section of this paper outlined a series of alternative uses of local employer surveys for CETA prime sponsors and their Private Industry Councils. The purpose of this section is to provide a general overview of a number of issues related to the design, implementation, and operation of surveys of private sector establishments at the local level. Given the potential for substantial diversity in the types of information that CETA prime sponsor and PIC staff may wish to collect from local firms, it is not possible to develop a manual of survey operations that would be equally applicable to all local employer survey efforts. As a result, this section of the paper will primarily focus upon a set of basic survey elements that are essential for designing and conducting employer surveys capable of yielding useful information. Among the elements of a survey that will be discussed within this section are the formulation of survey goals and objectives, the use of survey concepts, the design of survey instruments, the use of a sampling frame, and the development of a sample design. Brief discussions of alternative data collection techniques, potential problems of non-response, survey management techniques, and data output will also be provided. While these topics are discussed separately, it is important to note that they are frequently highly interrelated within the on-going operation of a local data collection effort. Inconsistencies in or problems with one component of the survey process can adversely influence other parts in such a way as to substantially undermine the value of the entire survey effort.

Developing Survey Goals

The set of goals and objectives that are established for a local survey effort will substantially shape other major components of the survey, particularly the sample design, the development of the survey instrument, and the selection of data collection techniques. Two general sets of goals may be established for local employer surveys. The first set of goals that a CETA prime sponsor or PIC may establish is analytical in nature. In such instances, the primary purpose of the local survey is to develop statistically reliable data for research, planning and/or evaluation purposes. A second and quite different set of goals for a local employer survey is that of assisting in the improvement of on-going operational aspects of the local employment and training delivery system. This would include efforts to improve the job development and placement performance of the system or to enhance the marketing of CETA services to local business establishments.

Frequently, there is a desire to accomplish both types of goals with a single type of survey in an effort to maximize the usefulness of the survey. Unfortunately, designing a survey that is both analytically and operationally useful can be quite difficult. Often times, the goals of analytical and operational usefulness will be in conflict with one another. For example, a survey designed to produce information to support planning, research, and evaluation efforts would often times have to be based upon a process involving the random selection of firms to participate in the survey. An effort to market CETA services, such as OJT, however, would ideally be targetted at a specific set of firms identified as most likely to be in need of such services or amenable to the provision of such services.

Biases in survey results can occur as a result of attempts to combine both analytical and operational objectives in one survey effort. Two general types of biases may occur as a result of multiple survey goals. Response bias may occur when a respondent, while willing to provide information for research purposes, does not desire to participate in CETA program activities. Problems of this nature have arisen in previous Bureau of Labor Statistics (BLS) efforts to collect and analyze data on job vacancies. As part of this data collection effort, State Employment Security Agency (SESA) job developers were given access to the firms' reports on their job openings. Based on the information appearing in these reported job openings, individuals seeking work were referred by SESA job placement staff to firms that responded to the job vacancy questionnaire. Data quality checks subsequently revealed that responding firms often times did not report their job openings for selected occupations, particularly professional and skilled blue collar jobs. Other firms simply reported that they had no current job openings although in fact job openings did exist within the firm. Such biases in reporting occurred as a result of the fact that some employers wished to avoid receiving job referrals from the SESA. As a consequence of the use of the analytical information for an operational purpose, the overall quality of the data produced under the survey was seriously undermined.[25]

A second type of bias, referred to as non-response bias, may occur as a result of combining analytical and operational goals. Non-response bias may occur when an establishment simply refuses to cooperate with the survey. Firms may choose not to cooperate with the local survey for a variety of reasons.[26] Experience with other establishment survey programs has revealed that cooperation is substantially impeded when operational components are included within the overall survey design.[27]

Clearly, a critical first step in the development of a local employer survey is to explicitly define the set of overall survey goals and to examine the extent to which such goals may be in conflict with one another in terms of the ability to develop an efficient and effective survey program. Particular attention should be paid to the potential biases that may occur as a result of attempting to achieve multiple goals within a single survey process.

Developing Survey Concepts

Survey concepts are a key component of any type of labor market survey. In the case of business establishments, survey concepts must be rigorously defined to allow for accurate measurement of a specific type of activity or behavior of the firm; e.g., new hires, current job openings. Concepts employed in local employer surveys should be developed in a manner that will allow them to be both meaningful and measurable. To be meaningful to both the data producer as well as the respondent, a survey concept should be defined in a readily understandable, yet rigorous and explicit manner. For example, if a survey questionnaire was developed to ask private sector employers what their "manpower needs" are, the set of responses would likely differ quite sharply from those that would be provided on the basis of a questionnaire that asked employers to list the number of job openings within specific occupations that were immediately available for occupancy by workers from outside of the firm. The "manpower needs" concept is not sufficiently rigorously defined. Consequently, survey respondents are likely to be uncertain as to exactly what type of information is being sought or for what period of time it is being sought. As a result, the set of responses provided by cooperating establishments will be based on their own notions of manpower needs and these notions may vary among respondents.[28] In short, the local employer survey will have measured something called manpower needs; however, the findings will not be readily interpretable since "manpower needs" were not consistently defined.

In addition to being meaningful, employer survey concepts must also be designed in such a way as to be readily measurable; i.e., the survey concepts need to be defined in a manner so that they can be easily understood by survey respondents. In addition, individuals in the establishment (e.g., personnel officers) must possess the information required to respond accurately to the survey questionnaire. While survey concepts can generally be defined in a readily understandable fashion, the problem of inadequate information upon which to base a reasonably accurate response may still exist. It is typically the case that information related to recent or current firm behavior is more likely to exist within the responding unit than information about a firm's intentions in the future. For example, an establishment is quite likely to possess internal data that would allow it to readily supply accurate information on its past and current levels of employment. Yet, with few exceptions, information related to firms' anticipated employment levels at some future date (1-2 years) does not readily exist. The Area Skills Surveys that were frequently sponsored by state and local employment and training agencies, including SESA's and vocational education agencies, until 1975 were primarily designed to capture information on firms' projected levels of employment by occupation and their anticipated hiring needs by occupation. While the methodologies employed in conducting such surveys typically suffered from a number of limitations, findings of a formal evaluation of the Area Skills Surveys revealed that employers often simply did not know, nor were they able to reasonably project, the likely level of employment within their establishment in the future.[29] In short, although employers readily understood what it was that the survey was trying to measure (i.e., the concept was meaningful), they did not possess the means to provide accurate responses. The survey concepts in this situation were essentially unmeasurable for most establishments.

In addition to developing survey concepts that are both measurable and meaningful, careful consideration should also be given to the intended uses of the data by local CETA prime sponsor staff and PIC members and their staff. Often times, the usefulness of locally produced data can be substantially enhanced by devising local survey concepts that are comparable with existing sources of labor market information. For example, the usefulness of a local job openings survey would be enhanced if the concept of a job opening that was employed by the survey was directly comparable with existing concepts of employment and unemployment and if the occupational classification system used in the survey was directly comparable to that of existing data sources on occupational employment, such as OES data. Such comparability in concepts and classification systems would potentially allow comparisons to be made between the estimated number of unemployed and job openings by occupation and enable job vacancy rates (vacancies/employment + vacancies) to be calculated for selected occupations.

Sampling Issues for Local Employer Surveys

Survey Scope

After developing overall survey goals and defining survey concepts, the next task is that of determining the "scope" of the employer survey. An employer survey's scope refers to the population of business establishments about whom the prime sponsor would like to learn something. Depending upon the goals of the survey, this scope can be broadly or narrowly defined. For example, prime sponsors may know little about the number or occupational distribution of new hires taking place within their local labor markets. In devising a survey to produce such data, the scope could be defined as all non-agricultural business establishments in the local labor market. Alternatively, in the process of analyzing existing industrial employment trends and occupational staffing patterns data, a prime sponsor may have identified a set of specific industry-occupational job clusters that it believes to be suitable for training. The CETA prime sponsor or PIC staff, however, may desire additional information on the wages, internal promotion opportunities, and hiring policies and practices for jobs within these clusters. The scope of a survey designed to produce such information would include only those establishments whose SIC classification fell within one of the relevant industry-occupation clusters.

In general, employer surveys characterized by a broad scope are more difficult to conduct than ~~the~~ more targetted surveys. Through the use of detailed industry employment data derived from the ES-202 program and occupational staffing pattern data from the Occupational Employment Statistics survey, local prime sponsor and/or PIC staff will be able to identify industry/occupational clusters that are experiencing favorable employment growth. Local prime sponsor data collection efforts can then be targetted at these specific job clusters. The survey's data collection efforts can then be designed to produce a wide variety of information about the characteristics of jobs within these specific clusters.

Sampling Frame

After determining the scope of the employer survey, it is necessary to procure a sampling frame. At a minimum, this sample frame should be capable of identifying the name, address, and industrial classification of the entire set of establishments that are within the survey's scope. The most comprehensive source of such establishment information is derived from unemployment insurance tax reports (Form ES-202) provided to the SESA's by all employers within a state that are covered by the federal and state unemployment insurance laws.[30] In addition to containing payroll and tax information, these reports also provide information on the firm's name, address, SIC industry classification, and employment level. Research divisions within the SESA's sort this information by industry and employment size class and use it to develop a sampling frame for conducting a number of cooperative federal-state statistical programs, such as the OES survey.

The public availability of sampling frame data from the ES-202 does, however, vary from state to state. Some states consider such information to be confidential in nature and will not identify specific establishments when providing any type of information to individuals outside of the SESA system. While other states are unwilling to provide specific employment data for individual establishments, they will provide prime sponsor staff with establishment listings that identify firms' names, addresses, industry classification, and employment size classes. SESA policies regarding prime sponsor access to various types of data also tend to differ sharply by state. As a first step in procuring a sampling frame, CETA prime sponsor staff should contact both their State Occupational Information Coordinating Committee (SOICC) as well as the Research and Statistics section of the SESA to discuss the possibilities of securing the ES-202 sample frame listings.

If establishment address listings from the ES-202 file are not available, prime sponsor staff should consider securing existing local industrial directories for use as a sampling frame. It is important to note, however, that use of such directories may require a substantial alteration in the scope of the data collection effort. Only in relatively rare instances will such directories include all of the business establishments within a local labor area or even all of the establishments within a selected set of industries within an area. Consequently, an employer-based data collection effort using such local industrial directories will likely be limited in scope as a result of prime sponsor decisions that involve targetting the survey at specific firms, and the relatively limited industrial and size-class information in such directories. Inferences based upon such survey data can be made only for the set of firms included within the directory. As a result of the limitations inherent within most local industrial directories, attempts to develop statistically reliable estimates of variables, such as new hire rates and job vacancies, are likely to prove quite difficult. Local industrial directories, therefore, are best suited for conducting surveys designed to provide insights into the activities of a selected set of individual firms and may potentially prove quite useful in developing profiles of specific local business firms, including their internal labor markets, hiring policies and practices, wage policies, and training practices.

Sample Size

After the scope of the survey has been defined and a sampling frame has been procured, the next steps involve a determination of the overall sample size for the survey and the development of methods for selecting establishments for inclusion within the sample. If a CETA prime sponsor or PIC intends to use the employer survey to produce statistically reliable estimates of labor market variables, two additional factors must be considered in determining the appropriate sample size.

First, consideration must be given to the desired degree of confidence that prime sponsor staff would like to have about the estimates that the survey will produce. Secondly, prime sponsors must consider the amount of resources that they are willing to devote to the survey's operation. In a probability based survey, it is generally true that increasing the size of the sample will lead to a reduction in sampling error for the estimates produced by the survey. Sampling error can be thought of as a measure of the potential degree to which the mean of a given sample may fail to truly reflect the mean of the entire population. Sampling error results from the fact that observations are made on only some fraction of the population of establishments.

Sampling error is also influenced by variations or differences in the characteristics of elements of the population. For example, if a CETA prime sponsor or Private Industry Council wished to measure new hires by occupation within local business establishments, the sample size required to do so would depend in part on the degree to which such new hires occurred among firms as well as on the desired level of confidence in the estimates produced. If all firms hired the same proportion of new workers for similar occupations, required sample sizes would be relatively small even if a high degree of confidence is desired. If, however, local firms tend to hire sharply different proportions of workers for diverse sets of occupations, then the sample size required to produce estimates with a given level of confidence would be relatively large. Thus, on the basis of purely statistical criteria, the sample size will be determined by the amount of sampling error that the prime sponsor or PIC is willing to tolerate and by the relative homogeneity of the population that is being studied.[31]

The process of determining appropriate sample sizes, however, must also take into account the level of resources that the prime sponsor is willing to devote to the data collection effort. For example, using the statistical approach discussed above, it may be found that a sample of 1500 establishments is required to produce an estimate with the desired degree of statistical confidence. The prime sponsor or PIC may be willing to spend $30,000 on the local survey. Contacts with other CETA prime sponsors, the SOICC, and the SESA may reveal, however, that the likely cost of conducting such a survey will be $30.00 per sample unit. The total estimated cost of sampling these 1500 units would, thus, be $45,000. Consequently, in order to stay within the predetermined budget, the sample size needs to be reduce to 1000 units. The effect of this sample reduction will be to raise the expected sampling errors associated with the estimates Developing sample sizes based on a realistic appraisal of per unit costs and the overall survey budget is an appropriate method for determining the sample size. Developing sample sizes without consideration of unit costs and the overall resources for conducting the survey may lead to serious problems when data collection is undertaken. Problems in achieving adequate rates of response are particularly likely to arise in such instances.

If prime sponsor or PIC staff have chosen to use employer surveys for reasons unrelated to statistical estimates, then the sample size issue becomes primarily a matter related to the availability of overall resources. Again, consideration should be given to unit costs and the size of the overall survey budget.

Sample Selection

Methods for selecting the sample of establishments will be dependent upon the purposes of the survey; i.e., whether the local survey is designed to produce statistically reliable estimates with a given degree of confidence or whether it is designed to produce information on a specific subset of local firms. If the survey's overall goal is to produce statistically reliable data, then a random sample selection process with a known probability of selection is required. Random selection simply means that, within a given population, each unit (economic establishment) has the same probability of being included within the sample.[32] It is equally important to know the probability of a given unit being selected (the sampling ratio), since the inverse of this particular probability will be used to make inferences about the overall population within the scope of the survey. For example, if a sample is designed to select one of every three units in the population, its sampling ratio is 1:3. The inverse of this ratio (3) becomes the weight upon which estimates for the entire population will be based.

If the overall goal of the local employer survey is to produce general information on the hiring, training, and wage policies of local firms or to develop information for use in prime sponsor program operations, such as job placement, then random selection of units for inclusion within the survey is likely to prove inefficient. A more efficient alternative would be to target the local data collection efforts upon a particular set of firms within the local labor area. In developing criteria for targetting the survey upon individual firms, prime sponsors should utilize existing labor market information on industry employment and occupational staffing patterns available from the SESA's. Given the information on industry employment growth and the occupational composition of employment within industries, CETA prime sponsor staff will be able to develop insights into specific growth industry and occupational areas in which they are particularly interested.

On the basis of the above data, firms can be selected for inclusion in the survey. In this way, the sample can be targetted at specific establishments about whom the prime sponsor would like to learn more. It is important to note, however, that selection of units in this way precludes the development of statistically reliable estimates for the universe of establishments. Given the existing data gaps reviewed in previous sections of this report, it is generally anticipated that a non-random approach to establishment sample selection would be most appropriate for meeting the bulk of prime sponsor and PIC data needs.

Internal Management of the Local Employer Survey

The organization of the employer survey data collection effort by the local CETA prime sponsor or the PIC will have a major influence upon the production of useful information for either analytical or operational purposes. Most local employer surveys will be designed to capture a rather substantial amount of individual pieces of information from a large and diverse number of local firms. Consequently, it is important for the survey operators to develop effective techniques for managing the data collection process in order to allow for the production of timely and accurate information.

The basic tool used to manage a local employer survey is a control file. A control file is composed of a list of sample establishments (usually individually recorded on 3 x 5 cards) including the name, address, SIC industry classification code, employment level, if available, and a unique identification number. The control file is used to monitor changes in the response status of individual units included within the sample. In addition, it is also used to monitor the overall rate of response for the survey. Unique response status codes should be developed by the survey operator for use in updating control cards whenever a unit's response status changes. At a minimum, the following types of response statuses should be assigned codes for purposes of updating control files:

- Out of business
- Out of the scope of the survey
- Usable response
- Unusable response
- Pending response
- Non-response
- Refusal

The use of such codes will allow the identification of particular problem areas, such as high rates of non-response or a poor or dated sampling frame. The latter problem will appear in the form of establishments found to be no longer in existence or outside the scope of the survey. Based on information contained within the control file, follow-up data collection efforts can be focused upon specific areas where response rates are relatively weak. Control files should also be used to record information on follow-up activities. Space should be provided on such files to record the types (mail, visit, telephone) of follow-up undertaken and the date that such follow-up contacts were made.

In addition to employing control files to manage the flow of schedules between the prime sponsor or PIC and the sample of local establishments, an internal schedule flow also needs to be developed. Such a schedule flow would focus upon processing the information mation provided by survey respondents. Such a process should consist at a minimum of the following tasks:

- A schedule checkin acknowledging receipt of a response on the control file;
- Editing and screening procedures, involving a review of the information provided by respondents to insure internal consistency. These procedures include comparisons of control file information with response information;
- Follow-up contacts with establishments to obtain additional information or to correct inconsistencies in the information provided;
- Updates of the response status of establishments on the control files (e.g., usable, non-usable);
- File schedules for use in producing data tabulations at the completion of the data collection effort.

While many of the tasks outlined above appear to be rather mundane, it should be noted that errors associated with the processing of data can lead to a substantial reduction in the accuracy of the data when final tabulations are produced. In organizing internal processing efforts, local CETA prime sponsor and PIC staff should consult with SESA research staff on methods for effectively organizing the overall internal processing operation. In addition, the Bureau of Labor Statistics has produced an OES Survey Operation Manual which provides a detailed discussion of techniques for organizing a large establishment data collection effort.

Data Collection

The data collection process typically employed in conducting local employer based surveys is composed of three basic components: initiation, data collection, and follow-up. The process of initiation simply consists of a set of efforts that are designed to enlist employer cooperation in the survey effort and to identify the individual or individuals within the establishment who possess or have access to the desired information. Often times, particularly in larger establishments, different types of employment and hiring information are available in different units within the establishment. For example, information on current employment levels and weekly earnings of employees may be readily available from the payroll office, information on starting hourly wages of jobs or current job openings may exist in the personnel office, and information on the firm's perception of the local CETA system may be best obtained through the chief executive officer of the corporation and/or foremen. While many employer surveys simply mail the appropriate form to the payroll department or personnel department, it has generally been found that identifying a specific individual with access to the desired information is a more effective approach.[33]

Initiation, thus, is not designed to directly generate information on establishment behavior. Instead its purpose is to identify a specific contact person within the establishment, to explain the survey's purpose and describe the features of the questionnaire that will be administered as part of the survey, and to solicit the cooperation of establishments. Generally, initiation of this type is carried out over the telephone prior to the actual data collection effort.

After initiation has been completed, the actual process of data collection can be undertaken. One of three approaches (mail, telephone, or personal visit) can be employed to collect the necessary information from employers. Depending upon the types of questions asked and the employment size distribution of the sample of establishments, any one or combination of approaches may be appropriate. If the questionnaire is brief and it is believed that the information is readily accessible to respondents, then data collection directly over the telephone may be most appropriate. If the questionnaire is more complex, requesting information on a variety of topics, personal visits may be required. Often times, a mix of approaches is most appropriate for collecting information from various employers. For example, the collection of the requisite information from larger establishments may prove to be more difficult due to organizational complexities, necessity of firm clearances to provide such information, etc. As such, it may prove useful to collect information from the larger establishments through personal visits. Due to the lower degree of organizational complexity within the smaller establishments, phone collection may prove to be the most effective strategy. While mail questionnaires have frequently been relied upon in conducting establishment surveys, telephone and personal visits at times can serve as more effective approaches for producing the desired information.

Typically, one can anticipate that initial attempts to obtain information from employers will not produce an adequate overall rate of response.[34] Consequently, in order to avoid the problems of non-response bias discussed above, substantial follow-up efforts will likely prove necessary. In most instances, local CETA prime sponsor or PIC staff will find that the bulk of the response generated by the survey effort will occur after at least one follow-up contact has been made. Consequently, in developing their overall survey plans, prime sponsor and/or PIC staff should be cognizant of the likely need to devote considerable resources to follow-up data collection efforts. In addition, follow-up contacts made through the mail are likely to prove rather ineffective. As a result, most follow-up efforts will have to conducted through the use of the telephone or personal visit.

In organizing their follow-up efforts, prime sponsor and PIC staff should carefully examine the control file and identify particular industrial, geographic, or employment size class areas in which response rates are lagging. Follow-up efforts can then be targetted to improve response rates in these particular areas. Again, telephone reminders, direct collection of information over the phone, and field visits may all serve as effective means for making follow-up contacts.[35]

Tabulating the Results of the Survey

Depending upon the questionnaire design and the sample size of the local employer survey, the survey operator may be capable of producing a substantial number of different types of tabulations of the survey data, including probability based estimates of key variables, summations of responses received, or cross-tabulations of responses by occupation and/or industry. Probability based estimates of new hire rates, turnover rates, and vacancy rates require substantial sophistication with respect to the use of statistical techniques and will likely require a computer systems capability as well. Problems in treating "atypical" responses as well as adjusting for non-response can prove quite difficult. For example, BLS has recently collected data on current job openings from a sample of approximately 1200 establishments in four states in March of 1979. Preliminary estimates of job openings within these four states, however, were not produced until May of 1980. Such substantial time lags in the production of the data have seriously limited the value of the information produced.

An alternative set of data tabulations that should be produced by prime sponsors in analyzing the information from local employer surveys simply involves the preparation of a number of tables designed to summarize the survey data provided by cooperating sample establishments. For example, if 700 local employers reported new hires data by occupation, then tables summing the responses by occupation across all 700 usable responses would be produced. Such summary tables are relatively easy to produce and can be completed manually. Although tables of this type do not provide information about those employers that failed to respond to the survey, they may be capable of providing substantial insights into the hiring behavior of a substantial segment of the local labor market.

Finally, local prime sponsor and PIC staff may be interested in developing individual profiles of the hiring, training, and promotion practices and policies of local employers. Such profiles may contain information on ports of entry, hiring practices and policies for ports of entry, the starting wage rates and hours of work for entry-level occupations, and promotion opportunities. Such information organized by occupation or an industrywide basis would be of substantial use for a wide variety of counseling, planning, and job development purposes by local prime sponsor and PIC staff.

The initial process of thinking through the types of tabulations desired should be undertaken simultaneously with the development of overall survey goals. A useful step in this process is to develop hypothetical table formats at the initial planning stages of the survey. The preparation of such tables will likely contribute to a clarification of a number of issues related to the overall design of the survey and will likely aid in avoiding a number of problems associated with producing desired tabulations after the data collection effort is completed.

Concluding Remarks

This paper began with a critical examination of the roles that labor market and occupational information could play in the planning, design, and administration of CETA employment and training programs at the local level. The review of existing sources of labor market information revealed that there are a number of valuable data sources, including industry and occupational employment data, available at the state and local level to assist CETA prime sponsors and Private Industry Councils in planning and designing employment and training programs. During the past decade, substantial progress has been made by the BLS, ETA, and the SESA's in developing a labor market and occupational information system for use in planning employment and training programs at the state and local level. Before embarking on any major establishment data collection effort, CETA prime sponsors and the PIC's should consult at a minimum with the Research and Statistics Divisions of the State Employment Security Agencies (SESA's) and the State Occupational Information Coordinating Committees (SOICC's) to determine current data availability.

While progress has been made in developing labor market and occupational information systems at the state and local level, a number of substantive information gaps do continue to exist. Comprehensive data on new hires, labor turnover, and current job openings by occupation and industry do not exist at either the state or local level. Information on the internal labor markets of local firms, their hiring practices and policies, their sources of labor supply by occupation, their training policies and practices, and wages and promotion opportunities for workers in entry-level occupations does not currently exist in any comprehensive and uniform fashion at the state and local level.

In this paper, we have argued that well-designed local employer surveys could assist in filling a number of the above gaps in the existing labor market and occupational information systems at the state and local level. To provide useful information for local CETA policymaking and planning, these employer surveys must be designed in a careful and rigorous manner and administered efficiently. In particular, the following procedures should be adhered to. First, the goals of the local employer survey need to be carefully thought out in advance of the design of the survey. Secondly, the survey instrument must be based upon survey concepts that are measurable and meaningful. Third, the sample design should be developed with the assistance of a comprehensive sample frame and should be based upon the explicit objectives of the survey and the level of resources available for conducting it. Fourth, effective internal management procedures must be established to guarantee that the survey's operations will succeed in achieving the objectives of the survey. Finally, local CETA prime sponsors and Private Industry Councils should conduct such surveys in close cooperation with the state SESA and SOICC organizations. If the above procedures are systematically followed, the information collected during the local employer survey will likely not only prove to be useful for planning local CETA training programs, but may also contribute in a substantive way to the development of truly comprehensive labor market and occupational information systems at the state and local level.

Footnotes

1. It should be noted that not all states currently participate in each of the surveys described in the preceding section. For example, several states currently do not participate in the Occupational Employment Statistics survey program (OES) or in the Labor Turnover Survey (LTS). Both programs are federal-state cooperative statistical programs administered by the U.S. Department of Labor's Bureau of Labor Statistics and the State Employment Security Agencies.

2. See: U.S. Department of Labor, Employment and Training Administration, "Comprehensive Employment and Training Act Regulations; Final Rule," Federal Register, April 3, 1979, "Sec.679.3-7," p. 200050.

3. See: Doeringer, Peter B. and Piore, Michael J., Internal Labor Markets and Manpower Analysis, D.C. Heath and Company, Lexington, Massachusetts, 1971, pp. 1-2.

4. For a more detailed discussion of this concept of "ports of entry" and the operations of internal labor markets,

   See: Kerr, Clark, "The Balkanization of Labor Markets," in Labor Economics and Labor Relations, (2nd Edition), (Edited by Lloyd G. Reynolds, et.al.), Prentice-Hall, Inc., Englewood Cliffs, New Jersey, 1978, pp. 62-71.

5. For a more detailed discussion of the alternative uses of job vacancy data for local CETA policymaking and program planning,

   See: i) Sum, Andrew M., "Isssues Related to the Purposes, Collection, Analysis, and Interpretation of Job Vacancy Data," Proceedings of the Bureau of Labor Statistics Job Vacancy Statistics Conference, Bureau of Labor Statistics, Washington, D.C., 1978;

   ii) Sum, Andrew and Harrington, Paul, Occupational Information Needs for CETA Prime Sponsor Policymaking, Planning, and Program Operations, A Report Prepared for the National Occupational Information Coordinating Committee, Washington, D.C., 1980.

6. The CETA legislation requires prime sponsors to administer institutional training programs only in occupational areas characterized by "skill shortages."

   See: 95th U.S. Congress, Public Law 95-524, "Section 121 (f) (5)."

7. Not all such shortage occupations would be suitable candidates for CETA training. Relatively low wages and adverse working conditions may be responsible for the existence of some

occupational shortages. Such occupations are frequently characterized by high rates of voluntary turnover and may not provide the employment stability and earnings necessary to achieve longer-term CETA goals.

8. Recent research findings of the Employment Service Potential project (ESP) in the state of California have revealed that ES placements accounted for approximately only 5% of all new hires for jobs lasting four or more days. This ratio was higher in manufacturing (9%) and services (6%) than in other sectors.

   See: State of California, Employment Development Department, Employment Data and Research, Employment Service Potential: People for Jobs and Jobs for People, Volume I: The Dimensions of Labor Turnover, Sacramento, 1979.

9. For a review of the features of this job vacancy survey and its implementation in the state of Massachusetts,

   See: Harrington, Paul and Bokan, Marianne, "Preliminary Findings of the Massachusetts Pilot Job Openings Survey Project," in Current Issues in Employment and Training Policy, Planning, and Evaluation, Center for Labor Market Studies, Northeastern University, 1980, pp. 339-392.

10. It should be noted that the CETA legislation included within the allowable activities under Title VII programs that of "encouraging employers to develop job skill requirement forecasts and to coordinate such forecasts with prime sponsors."

    See: 95th U.S. Congress, Public Law 95-524, "Section 705 (a) (10)."

11. See: Barton, Paul E., "Youth Transition to Work: The Problem and Federal Policy Setting," in From School to Work: Improving the Transition, National Commission for Manpower Policy, Washington, D.C., 1976, pp. 1-20.

12. The job orders placed with SESA Job Banks by employers frequently do contain some information on the hiring requirements for these jobs, including educational requirements and previous experience requirements.

13. Several prime sponsors have established employer advisory groups to provide information on the job duties of workers in specific occupations and the typical hiring requirements of local employers for such jobs. This information is primarily descriptive and qualitative in nature rather than quantitative. For a recent example of a study based on such employer advisory groups,

See: Lynton, Edith F.; Seldin, Joel R.; and Gruhin, Sarah; Employers' Views on Hiring and Training, Labor Market Information Network, N.Y., 1978.

14. See: Freedman, Marcia and Dutka, Anna, Training Information for Policy Guidance, Employment and Training Administration, R & D Monograph 76, U.S. Government Printing Office, Washington, D.C., 1980.

15. The potential usefulness of such entry-level occupational inventories in the counseling of students has been noted by a number of individuals. For example,

See: i) Wolfbein, Seymour L., "Informational and Counselor Needs in the Transition Process," From School to Work: Improving the Transition, A Collection of Policy Papers Prepared for the National Commission for Manpower Policy, U.S. Government Printing Office, Washington, D.C., 1976, pp. 173-200.

ii) Sum, Andrew and Harrington, Paul, Occupational Information for CETA Prime Sponsor Policymaking, Planning and Program Operations, A Report Prepared for the National Occupational Information Coordinating Committee, Center for Labor Market Studies, Northeastern University, Boston, 1980.

16. See: 95th U.S. Congress, Public Law 95-524, "Section 2, Statement of Purpose."

17. For a more detailed overview of the strengths and shortcomings of existing local data sources on wages and hours of work by occupation,

See: Sum, Andrew and Harrington, Paul, Occupational Information for CETA Policymaking, Planning, and Program Operations, particularly Chapter Four.

The 1980 Census of Population and Housing will provide detailed information on the annual earnings of workers in state and local labor areas during calendar year 1979. The annual earnings data from the decennial census are, however, characterized by a number of shortcomings that limit their usefulness for identifying the earnings potential of jobs in specific industries and occupations. For a more detailed discussion of the annual earnings data from the decennial censuses and other surveys,

See: Harrison, Bennett and Sum, Andrew, "Data Requirements for 'Dual' or 'Segmented' Labor Market Research," Concepts and Data Needs: Counting the Labor Force, Appendix Volume I, U.S. Government Printing Office, Washington, D.C., 1980.

18. Among the studies that have attempted to estimate the independent effects of industry attachment upon the earnings of workers in particular occupations are the following:

i) Wachtel, Howard M. and Betsey, C., "Employment at Low Wages," Review of Economics and Statistics, May 1972, pp. 121-129;

ii) Sum, Andrew and Tortora, Frank, "The Determinants of Clerical Wage Differentials in a Local Labor Market: Implications for Local Employment and Training Programs," Unpublished Working Paper, Department of Economics, Northeastern University, Boston, 1975;

iii) Brown, Gary D., "How Type of Employment Affects Earning Differences by Sex," Monthly Labor Review, July 1976, pp. 25-30.

19. For a more detailed discussion of the role and nature of OJT in various industries,

See: i) Doeringer, Peter B. and Piore, Michael J., op.cit.;

ii) Freedman, Marcia and Dutka, Anna, op.cit., particularly pp. 31-41.

20. For an overview of criteria that can be used to select such a subset of occupations for employer-based surveys within a local labor area,

See: Sum, Andrew; Sawhney, Pawan K.; and Herrnstadt, Irwin; Issues in the Development of a Comprehensive Occupational Information System for the State of Massachusetts, Paper Prepared for the Massachusetts Division of Employment Security, Occupation/Industry Research Division, Boston, 1977.

21. Howard Rosen's remarks appeared in a Foreword to the following publication:

Freedman, Marcia and Dutka, Anna, op.cit., p. iii.

22. For an analysis of the influence of OJT opportunities on the age-earnings profiles of workers,

See: Mincer, Jacob, "On-the Job Training: Costs, Returns, and Some Implications," Journal of Political Economy, Supplement LXX, October 1962.

23. The findings of employer interviews with respect to promotion opportunities for workers in fifteen projected high net demand occupations in the Boston SMSA were presented in the following publication:

Mazzeo, Katherine and Sum, Andrew, An Analysis of On-the-Job Training, Promotion Opportunities, and Job Vacancies in the Fifteen High Net Demand Occupations, Research and Program Development Division, Massachusetts Department of Manpower Development and Center for Labor Market Studies, Northeastern

University, Boston, 1978.

24. For an example of a PIC-funded employer survey designed in part to solicit such information from local employers,

See: Sherlock, Robert, "CETA Employer Surveys: Focus on the Needs and Expectations of Local Business," Paper Presented to the Conference on CETA Planning and Private Sector Needs, Sponsored by the Center for Labor Market Studies of Northeastern University in cooperation with Region I, Employment and Training Administration, Danvers, Massachusetts, April 1980.

For a review of the findings of a recent case study of CETA-private sector linkages in nine prime sponsor planning areas throughout the nation,

See: Lecht, Leonard A. and Matland, Marc A., *Involving Private Employers in CETA Programs: A Case Study*, Employment and Training Administration, R & D Monograph 75, U.S. Government Printing Office, Washington, D.C., 1979.

25. Harrington, Paul, *The Labor Department's Experience in the Collection and Analysis of Job Vacancy Statistics: The Experimental Programs of 1964-66*, Center for Labor Market Studies, Northeastern University, Boston, Forthcoming, 1980.

26. Bokan, Marianne; Harrington, Paul; and Sturniolo, Louis; *Preliminary Findings on Response Rates in the First Round of the Massachusetts Pilot Job Openings Survey*, Massachusetts Department of Manpower Development, Research Paper Number Eight, Boston, September, 1979.

27. Harrington, Paul, *The Labor Department's Experience*....

28. Slotkin, Elizabeth J., "Problems in the Collection of Data on Job Vacancies," in *The Measurement and Interpretation of Job Vacancies*, National Bureau of Economic Research, New York, 1966.

29. Macro Systems, Inc., *An Evaluation of the Occupational Training Information System*, 1975.

30. For a more detailed overview of the ES-202 data collection system,

See: U.S. Department of Labor, Bureau of Labor Statistics, *BLS Handbook of Methods*, Bulletin 1910, pp. 66-73.

31. For a detailed discussion of a wide variety of issues associated with sample design and survey operations,

See: Hansen, Morris; Hurwitz, William; and Madow, William; *Sample Survey Methods and Theory, Volume I: Methods and Applications*, John Wiley and Sons, Inc., New York, 1966.

32. This applies to simple random samples. Often times employer surveys are based upon a stratified random sample in which the sampling frame is stratified into clusters or cells. Such stratification permits oversampling in some cells while still maintaining randomness since the probability of selection of a given unit within a cell is the same for all units within the cell.

33. See: Bokan, Marianne, Initiation of the Job Openings Survey in Massachusetts, Massachusetts Department of Manpower Development, Boston, August, 1979.

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35. See: i) Harrington, Paul, et. al., Telephone Follow-up in the Job Openings Survey in Massachusetts, Massachusetts Department of Manpower Development, Boston, August, 1979;

ii) Baigelman, Lori; Cleary Paul; and Harrington, Paul; Field Follow-Up in the Job Openings Survey in Massachusetts, Massachusetts Department of Manpower Development, Boston, August, 1979.

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Appendix A:

INTERVIEW QUESTIONNAIRE FOR EMPLOYER BASED SURVEY OF SELECTED HIGH NET DEMAND OCCUPATIONS IN THE BOSTON SMSA

INTERVIEW QUESTIONNAIRE FOR EMPLOYER-BASED SURVEY OF SOURCES OF LABOR SUPPLY IN SELECTED HIGH NET DEMAND OCCUPATIONS IN THE BOSTON SMSA

1. (a) Title of U.S. Bureau of Census occupation(s) for which the firm is being interviewed ______________________________.

   (b) Firm's occupational titles for census occupation being surveyed ________

   ____

   ____

2. Name of firm ______________________________

3. Address ______________________________

   ____

4. SIC classification ______________________________

5. Person interviewed ______________________________
   Name

   ____
   Title

   ____
   Phone Number

6. Total employment in establishment (Average Monthly

	1974	1975	1976
a. Total	______	______	______
b. Full time	______	______	______
c. Part time	______	______	______

7. Total number of persons employed in the specific occupation being surveyed (average monthly-if known)

	1974	1975	1976
a. Total	______	______	______
b. Full time	______	______	______
c. Part time	______	______	______

8. Hourly or weekly wages in the occupation:

a. Beginning wage (no experience) ____________________

b. Average wage of those employed ____________________

c. Maximum wage of those employed ____________________

9. Number of new hires in 1976:

(a) Total ____________________

Due to
(b) Growth ____________________

(c) Replacements ____________________

(i) quits __________ (ii) fires __________

10. Hiring Requirements for occupation being surveyed:

a. Minimum educational requirement of new hires ____________________

b. Typical educational attainment of new hires ____________________

c. Previous experience required? Yes __________ No __________

Amount of previous experience (in months ____________________

d. Other hiring requirements: (test scores, educational degrees, character traits, license requirements, etc.)

(1)

(2)

(3)

(4)

e. Do hiring requriements vary with local labor market conditions, i.e., lower unemployment rates?

11. Sources of supply for those employed in the occupation (1976)
(Check appropriate category)

	0%	1-10%	11-15%	26-50%	51-75%	76% +
(a) Public or private vocational education, secondary level	____	____	____	____	____	____

11. Sources of supply for those employed in the occupation (1976) - Continued

	0%	1-10%	11-25%	26-50%	51-75%	76% +
(b) Private vocational education, post secondary						
(c) Community Colleges						
(d) Other public vocational education, post secondary						
(e) Junior Colleges (private)						
(f) CETA programs						
(g) Universities and Colleges						
(h) Internal labor market						
(1) Formal OJT						
(2) Informal OJT						

(i) Recruitment from other firms ____________________

____

(j) Other sources ____________________

____

If firm does not hire from (a), (b), or (c), why not? ____________________

____

____

12. Sources of supply for those hired in the two previous years: (Check appropriate category).

	0%	1-10%	11-25%	26-50%	51-75%	76% +
(a) Public or private vocational education, secondary						
(b) Private vocational education, post secondary						

12. Sources of supply for those hired in the two previous years (Continued):

	0%	1-10%	11-25%	26-50%	51-75%	76% +
(c) Community Colleges						
(d) Other public vocational education, post secondary						
(e) Junior Colleges						
(f) CETA Programs						
(g) Universities and Colleges						
(h) Internal labor market						
(1) Formal OJT						
(2) Informal OJT						

(i) Recruitment from other firms ______________________________

____

(j) Other ______________________________

____

13. What proportion of new hires took place from outside the firm as opposed to the internal transfer of employees? ______________________________

____

Has this proportion remained relatively the same as that for the previous two years? Yes ______________ No ______________. If not, what was the proportion in the previous two years? ______________, and why did this change occur? ______________________________

____

____

____

14. Sources of Recruitment: (Check appropriate category)

	Very Imp. 76% +	Quite Imp. 51-75%	Imp. 26%-50%	Fairly Imp. 10%-25%	Not Imp. <10%	Not at All 0%
(a) Direct Applications						
(b) Referrals of Friends and Relatives of Existing Employees						
(c) Contacts with Schools and Training Institutions						
-Vocational Education, Secondary						
-Vocational Education, Post Secondary						
-Proprietary Schools						
-CETA Programs						
(d) Newspaper Ads						
(e) D.E.S.						
(f) Private Employment Agencies						
(g) Other Firms						
(h) Transfer of Employees in Firm						
(i) Other ____________						
________________						

15. If company trains its own work force for the occupation:

(a) How many in a year? ________ % of Total Hiring Needs ____________

(b) How many formal OJT? ________ % of Total Hiring Needs ____________

(c) How many informal OJT? ________ % of Total Hiring Needs ___________

(d) Length of training provided (in weeks) __________________________

Formal OJT ____________________________
Informal OJT ___________________________

15. If company trains its own work force for the occupation: (Continued)

(e) Any outside schooling provided? ____

____

(f) How long? ____

____

16. If OJT is provided, which employees (in terms of occupations) are selected for participation? ____

____

Do bid rights exist? ____

17. Can current employees in this occupation get promoted internally to occupations? Yes ____________________ No ____________________

Proportion who typically get promoted ____________________________

Types of occupations in firm to which promoted ____________________________

____

18. Job Openings in occupation being surveyed:

(a) Number of unfilled job openings during the most recent week?

____

(b) Number of unfilled openings per week on average during the last four weeks? ____________________________

(c) Number of unfilled openings per week on average during the last two months? ____________________________

(d) Number of unfilled openings per week on average during the last year? ____________________________

19. How long does it take to fill an opening? ________ 1 week or less ________ 1-4 wks. ________ 5-12 wks. ________ 12 wks. +

20. Do you consider it (a) very easy (b) fairly easy (c) somewhat difficult or (d) very difficult to fill job openings?

21. Do you generally hire persons in the occupation from (a) the Boston Metropolitan Area (b) Other areas of Massachusetts or (c) outside of Massachusetts?

Specify those cities and towns which are frequent sources of new hires: ______________________________

____

____

22. Hiring plans for the next two years in this occupation:

	1977	1978
Total New Hires	______	______
New Hires Due to Growth	______	______
New Hires due to Replacement	______	______
Quits	______	______
Fires	______	______

23. How could public vocational educational and manpower training programs, such as CETA, assist in recruiting a qualified labor force?

The Significance of Local Employer Surveys in a Comprehensive Occupational Information System

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Massachusetts SOICC
April 10, 1980

Introduction

The use of local employer surveys as a tool for manpower planning/forecasting or as a source of supplemental information on local industries and occupations has been a subject of controversy for decades. There are many technical as well as practical issues involved in designing, conducting and interpreting such surveys and one's position on these issues is, to a great extent, a function of one's particular position in the employment and training community. The primary purpose of this publication is to provide readers with a better perspective on the broad range of opinion on these issues and it is not our intention to repeat these in the introductory section. Instead, we wish to put the specific topic of employer surveys into a broader context; namely, how the information generated by local employer surveys can help in the development of a comprehensive occupational information system. The general concern with the development and implementation of a comprehensive occupational information system (OIS) and the particular role of employer surveys in that system, is not simply an exercise in intellectual speculation or of academic interest. Several pieces of recent federal legislation have specifically mandated the establishment and use of just such a system.

Legislative Background

The Education Amendments of 1976 (PL94-482) required the establishment of a national network of State Occupational Information Coordinating Committees (SOICCs) as well as a national OICC. Section 161(b)(1) of this law states that a primary purpose of the NOICC/SOICC network shall be:

> To develop and implement an occupational information system to meet the common occupational information needs of vocational education programs and employment and training programs at the national, state and local levels, which system shall include data on occupational demand and supply based on uniform definitions, standardized estimating procedures, and standardized occupational classifications.

Three other pieces of legislation which re-emphasized or expanded upon NOICC/SOICC's responsibility to develop OIS are:

Youth Employment and Demonstration Programs Act of 1977 (PL95-93)

This legislation addressed the need to give special attention to the problems of unemployed youth by "assisting and encouraging the development of state occupational information systems." Special emphasis was placed on the need for computerized career guidance and job placement systems.

Career Education Incentives Act (PL95-27)

This act focused on the responsibilities of agencies administering vocational education programs and the need to gather, analyze and disseminate occupational and career information.

Comprehensive Employment and Training Act (CETA) Reauthorization (PL95-525)

This act was very similar to the YEDPA legislation and serves to reinforce the need for state and local employment and training agencies to support the development of a comprehensive occupational information system. In addition, the activities and services funded under the Governor's "Special Grant" were to include "the facilitation and fostering of the activities of the SOICC."

One can see from this summary that the establishment of an OIS will involve numerous agencies and it is designed to serve a broad array of users.

Organizational Structure

Given the above legislative requirements, the NOICC/SOICC network was established starting in 1976. In Massachusetts, the MOICC (Massachusetts Occupational Information Coordinating Committee) was established in November 15, 1977 by an Executive Order of the Governor. The Committee consists of the following members:

- Assistant Secretary of Economic Affairs for Manpower Development (DMD).
- Commissioner of Rehabilitation (Voc. Rehab.)
- Director of the Division of Employment Security (SESA)

An Executive Director and small staff are responsible for coordinating with appropriate staff members of the above agencies and implementing the mandates of the Committee. The diagram on the following page gives an overview of the organizational relationships of the OICC at both the state and national level.

Components of an OIS

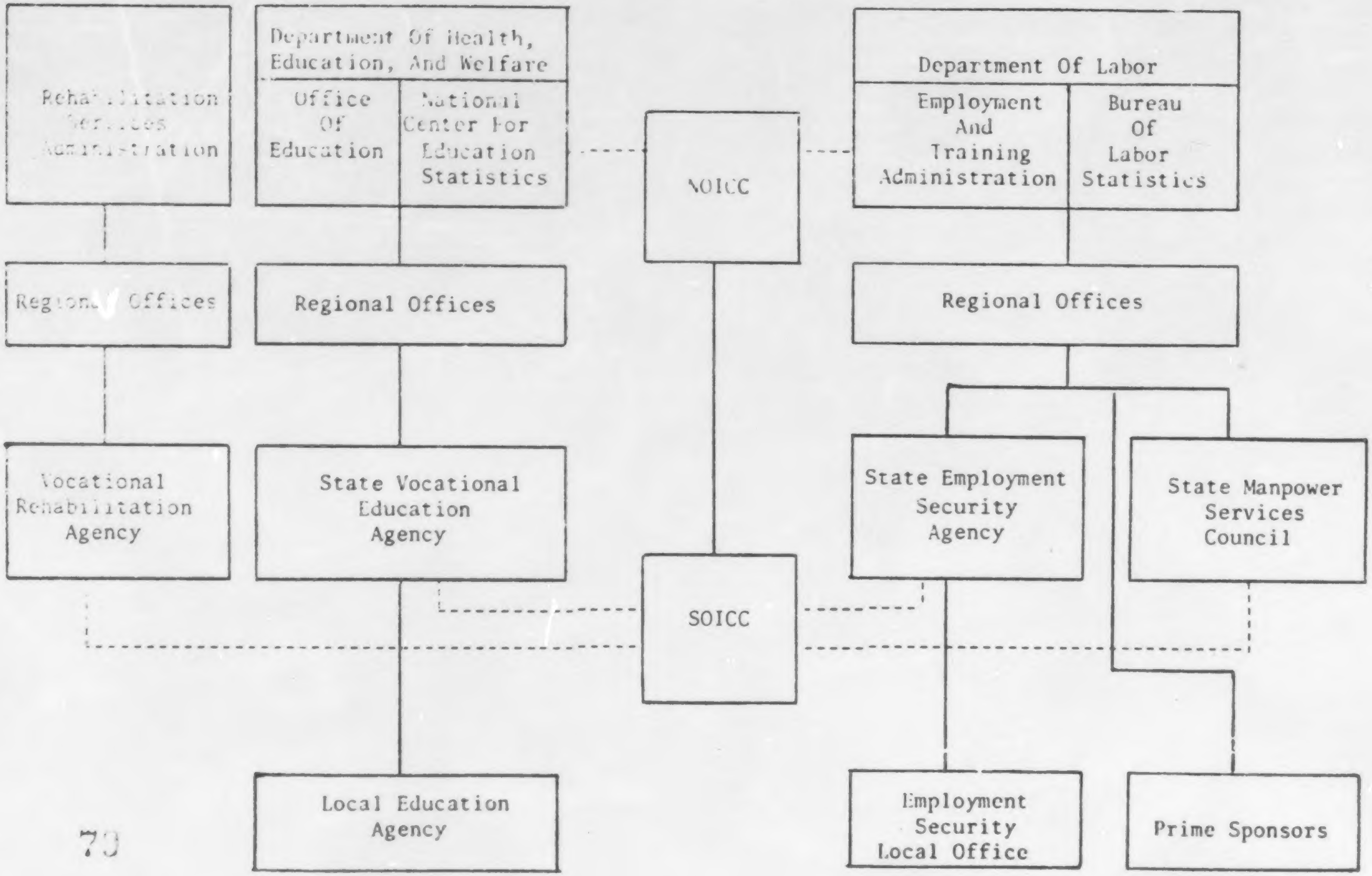
The best way to describe an OIS, as a static concept, is to define the key components of the information base. Essentially, there are four components in a comprehensive OIS. They include:

1. Occupational Demand

Current Occupational Demand -- This term is defined as the sum of those persons who are employed in an occupation plus the number of job vacancies in that occupation.

- Current Occupational Employment -- This is the number of jobs in an occupation that are currently filled by workers.
- Job Vacancies -- Actual jobs which are immediately available for filling, and for which an employer is actively trying to find or recruit workers.

NOICC/SOICC ORGANIZATIONAL INTERRELATIONSHIPS


Rehabilitation Services Administration
Department Of Health, Education, And Welfare
Office Of Education
National Center For Education Statistics
NOICC
Department Of Labor
Employment And Training Administration
Bureau Of Labor Statistics
Regional Offices
Regional Offices
Regional Offices
Vocational Rehabilitation Agency
State Vocational Education Agency
State Employment Security Agency
State Manpower Services Council
SOICC
Local Education Agency
Employment Security Local Office
Prime Sponsors

Projected Occupational Demand -- The sum of current demand and the growth demand over the projected time period. Growth demand may be based upon changes in industrial staffing patterns or industrial growth.

2. Occupational Supply

Current Occupational Supply -- This term is defined as that portion of the labor force having an attachment to a particular occupation. This supply component consists of two elements:

- Current Occupational Employment -- This is the number of jobs in an occupation that are currently filled by workers.
- Unemployed -- This is the number of persons who are not employed but are both qualified for and actively seeking work in an occupation.

Projected Occupational Supply -- The sum of current supply and the net difference between occupational entrants and occupational separations. Occupational entry and separation are based upon migration, occupational transfers, labor force separation and entry, and the number of completers from education and training programs.

3. Occupational Characteristics

Occupational Characteristics -- Information about the worker and work performed in an occupation including duties, requirements, working conditions, methods of entry, earnings, and employment profiles.

4. Complementary Information

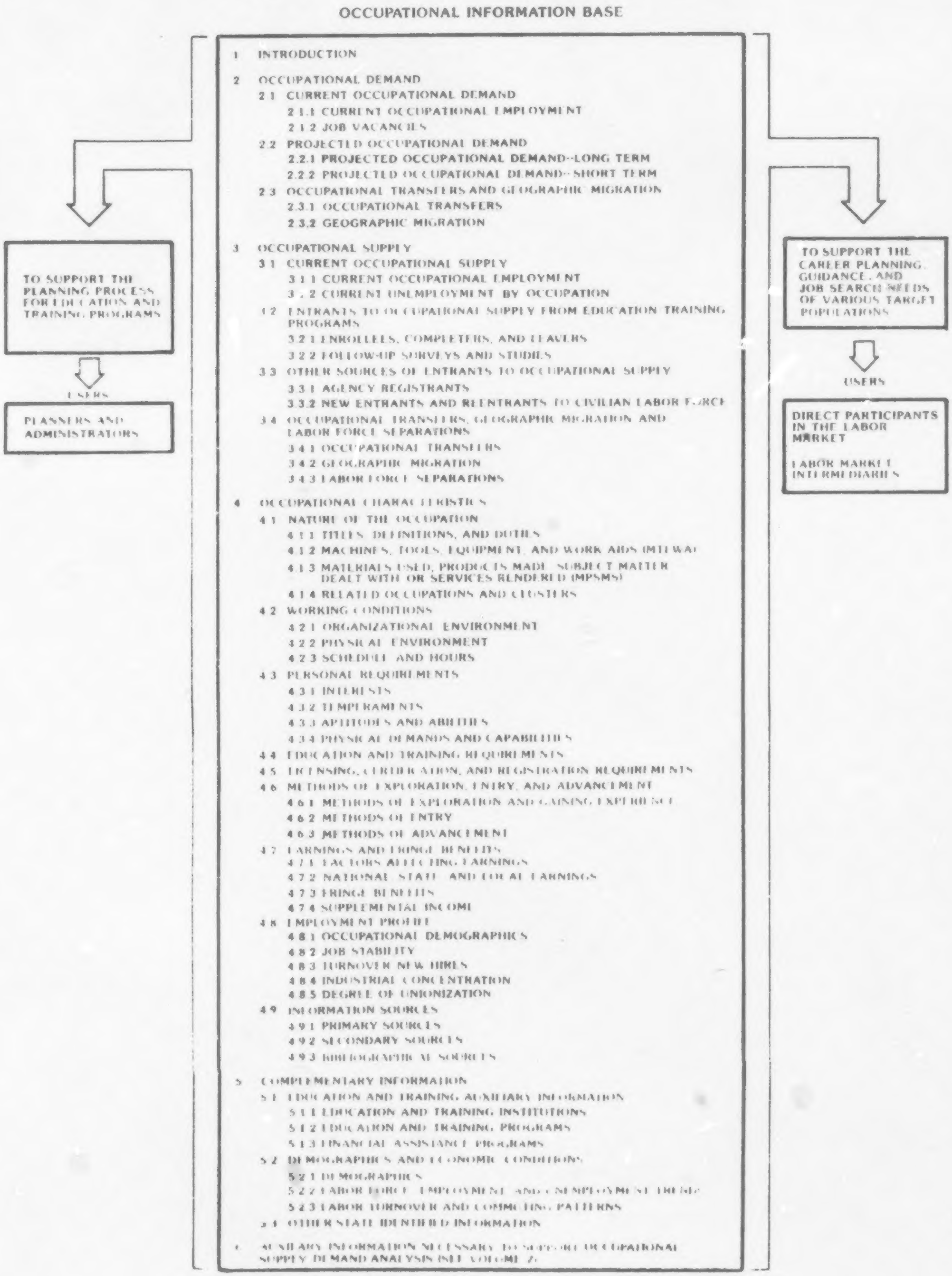
Complementary Information -- Information that is not occupation - specific but is useful in OIS analysis. Included are education and training information, demographic and economic data, and other state-identified information.

The diagram on the following page provides even more detail on the different concepts or measures which should be included in an OIS data base. One should also note on this diagram that, although there are many users of occupational information, there are really only two major emphases; one is to support the planning process for education and training programs while the other is to support the career guidance or job search efforts of individual job seekers and labor market intermediaries.

Simply defining the terms or concepts and outlining the components of an OIS is not a particularly difficult task. But the task of actually implementing and operating one presents a number of technical and operational problems. If one studies the OIS Information Base diagram, it can be seen that certain components of information, while conceptually necessary, are extremely difficult to actually measure. For example, information on the nature and extent of geographic or occupational mobility (3.4.1 and 3.4.2) is vital in understanding the dimensions of labor supply in a particular occupation. However, despite its conceptual importance, this information is virtually nonexistent to the local level. The same can be said of substate projections of occupational demand, occupational turnover rates and many other components.

For this and other reasons, the task of developing a comprehensive OIS is, of necessity, going to involve several dimensions of activity. In some areas, the task will simply involve the formatting, packaging and dissemination of existing information. In

OIS INFORMATION BASE AND THE TWO MAJOR USES OF OCCUPATIONAL INFORMATION



OCCUPATIONAL INFORMATION BASE

1 INTRODUCTION

2 OCCUPATIONAL DEMAND
  2.1 CURRENT OCCUPATIONAL DEMAND
    2.1.1 CURRENT OCCUPATIONAL EMPLOYMENT
    2.1.2 JOB VACANCIES
  2.2 PROJECTED OCCUPATIONAL DEMAND
    2.2.1 PROJECTED OCCUPATIONAL DEMAND--LONG TERM
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  2.3 OCCUPATIONAL TRANSFERS AND GEOGRAPHIC MIGRATION
    2.3.1 OCCUPATIONAL TRANSFERS
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3 OCCUPATIONAL SUPPLY
  3.1 CURRENT OCCUPATIONAL SUPPLY
    3.1.1 CURRENT OCCUPATIONAL EMPLOYMENT
    3 . 2 CURRENT UNEMPLOYMENT BY OCCUPATION
  3.2 ENTRANTS TO OCCUPATIONAL SUPPLY FROM EDUCATION TRAINING PROGRAMS
    3.2.1 ENROLLEES, COMPLETERS, AND LEAVERS
    3.2.2 FOLLOW-UP SURVEYS AND STUDIES
  3.3 OTHER SOURCES OF ENTRANTS TO OCCUPATIONAL SUPPLY
    3.3.1 AGENCY REGISTRANTS
    3.3.2 NEW ENTRANTS AND REENTRANTS TO CIVILIAN LABOR FORCE
  3.4 OCCUPATIONAL TRANSFERS, GEOGRAPHIC MIGRATION AND LABOR FORCE SEPARATIONS
    3.4.1 OCCUPATIONAL TRANSFERS
    3.4.2 GEOGRAPHIC MIGRATION
    3.4.3 LABOR FORCE SEPARATIONS

4 OCCUPATIONAL CHARACTERISTICS
  4.1 NATURE OF THE OCCUPATION
    4.1.1 TITLES, DEFINITIONS, AND DUTIES
    4.1.2 MACHINES, TOOLS, EQUIPMENT, AND WORK AIDS (MTEWA)
    4.1.3 MATERIALS USED, PRODUCTS MADE, SUBJECT MATTER DEALT WITH OR SERVICES RENDERED (MPSMS)
    4.1.4 RELATED OCCUPATIONS AND CLUSTERS
  4.2 WORKING CONDITIONS
    4.2.1 ORGANIZATIONAL ENVIRONMENT
    4.2.2 PHYSICAL ENVIRONMENT
    4.2.3 SCHEDULE AND HOURS
  4.3 PERSONAL REQUIREMENTS
    4.3.1 INTERESTS
    4.3.2 TEMPERAMENTS
    4.3.3 APTITUDES AND ABILITIES
    4.3.4 PHYSICAL DEMANDS AND CAPABILITIES
  4.4 EDUCATION AND TRAINING REQUIREMENTS
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  4.6 METHODS OF EXPLORATION, ENTRY, AND ADVANCEMENT
    4.6.1 METHODS OF EXPLORATION AND GAINING EXPERIENCE
    4.6.2 METHODS OF ENTRY
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  4.7 EARNINGS AND FRINGE BENEFITS
    4.7.1 FACTORS AFFECTING EARNINGS
    4.7.2 NATIONAL, STATE, AND LOCAL EARNINGS
    4.7.3 FRINGE BENEFITS
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  4.8 EMPLOYMENT PROFILE
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    4.8.2 JOB STABILITY
    4.8.3 TURNOVER NEW HIRES
    4.8.4 INDUSTRIAL CONCENTRATION
    4.8.5 DEGREE OF UNIONIZATION
  4.9 INFORMATION SOURCES
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5 COMPLEMENTARY INFORMATION
  5.1 EDUCATION AND TRAINING AUXILIARY INFORMATION
    5.1.1 EDUCATION AND TRAINING INSTITUTIONS
    5.1.2 EDUCATION AND TRAINING PROGRAMS
    5.1.3 FINANCIAL ASSISTANCE PROGRAMS
  5.2 DEMOGRAPHICS AND ECONOMIC CONDITIONS
    5.2.1 DEMOGRAPHICS
    5.2.2 LABOR FORCE, EMPLOYMENT, AND UNEMPLOYMENT TRENDS
    5.2.3 LABOR TURNOVER AND COMMUTING PATTERNS
  5.3 OTHER STATE IDENTIFIED INFORMATION

6 AUXILIARY INFORMATION NECESSARY TO SUPPORT OCCUPATIONAL SUPPLY DEMAND ANALYSIS (SEE VOLUME 2)

TO SUPPORT THE PLANNING PROCESS FOR EDUCATION AND TRAINING PROGRAMS

USERS

PLANNERS AND ADMINISTRATORS

TO SUPPORT THE CAREER PLANNING, GUIDANCE, AND JOB SEARCH NEEDS OF VARIOUS TARGET POPULATIONS

USERS

DIRECT PARTICIPANTS IN THE LABOR MARKET

LABOR MARKET INTERMEDIARIES

other cases, it will involve the development of methodologies or procedures to facilitate the analysis of information. Still another task will be the need to provide training or technical assistance on the development and use of occupational information in general. In all of these areas, a major priority will be to strive for maximum coordination to avoid duplication of efforts and to ensure available information is widely disseminated.

Role of Employer Surveys in an OIS

The unique significance of employer surveys is readily apparent when one views them in the larger context of a comprehensive occupational information system. In category 4 (Occupational Characteristics) of the OIS Information Base diagram, one can see the types of information needed to develop an understanding of the characteristics of an occupation or group of occupations. It is this type of information that is most relevant to the program planner, job developer or job seeker. Knowledge of the aggregate supply and demand situation in a given occupation is important, but in addition, one needs information on hiring policies and practices of local firms, wage and fringe benefit information by occupation, training and internal promotion policies of local firms and other "internal labor market" data, specific to local firms for a given occupation. Despite the importance of this type of information it is currently one of the most underdeveloped components of the existing occupational information system. There are no standard guidelines, routine time frames or coordinating mechanisms for the regular collection and use of this type of information. To the extent that this information is deficient or unavailable, our efforts to operate effective programs or provide relevant career guidance and placement assistance are diminished.

The inception of the Private Sector Initiative Program (PSIP) under Title VII of the 1978 CETA Reauthorization represented a major and sorely needed shift in the focus of the CETA program. The importance of acquiring an understanding of the training needs of the local business community was explicitly addressed by the requirement to "survey employment demands...in the private sector." It is clear from the wording of the law and the regulations that local sponsors, through their PICs (Private Industry Councils) are expected to engage in some sort of local information gathering and information analysis at the local level. While there is widespread support for this shift in emphasis, there is a wide range of opinion regarding such issues as; the type and frequency of surveys which are conducted, the methodology used to gather the information; and the interpretation and use of survey results. These are all concerns of local CETA sponsors and PICs. They are also issues which concern the agencies comprising the SOICC. Each organization's perspective is somewhat different and, when one examines local or state agency's priorities, it is apparent that some type of coordination regarding the design, execution and use of local employer surveys would be beneficial to all parties involved.

Coordination of this activity is important from the standpoint of eliminating the duplication of efforts. There are already a number of employer surveys which are conducted by the Research Department of the State Employment Security Agency (SESA) and, at a minimum, plans to conduct such surveys should first be coordinated with the SESA Research Unit. Such an effort would not only ensure that all available information is used before conducting a survey, but would also minimize the burden on employers who are frequently asked (or required) to respond to a multitude of information requests from various agencies. Coordination of such surveys would also enable local planners to benefit from the experience of other agencies at the state and local level, who are already experienced in the design and implementation of such surveys. Finally, greater coordination would lead to the development of a more substantive and comprehensive data base and would represent a major step forward in the establishment of a comprehensive OIS.

Conclusions and Recommendations

The funadmental issue from the standpoint of the OICC member agencies is one of ensuring that the increasingly scarce resources available for information gathering are used in the most effective way. Since the SOICC is required to foster such coordination at the state level, it is ideally suited to serve as a catalyst in bringing together the various groups involved in the area of employer surveys. Several recommendations for achieving meaningful cooperation in this area are:

- Establishment of a statewide employer survey information clearinghouse.
- Establishment of a representative advisory committee which would collectively review planned employer surveys in order to provide advice or assistance and to minimize possible duplication.

- Establishment of a formal mechanism for providing technical assistance or training in related areas, such as forms design, collection techniques and quantitative analysis.
- Establishment of a regular means of disseminating the relevant findings of various surveys to any interested individuals in the employment and training community.

We believe that all of these recommendations are attainable within the existing resources at the state and local level. It is also our firm belief that meaningful cooperation in this area will tend to benefit all groups in the employment and training system with a minimal cost or disruption of activity to any one organization, resulting in an improvement in the development and dissemination of relevant occupational information.

Section Two: FEDERAL AND STATE AGECNY PERSPECTIVES ON EMPLOYER SURVEYS

Employer Surveys: A National Occupational Information Coordinating Committee (NOICC) Viewpoint

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Prepared for:

Conference on Private Sector
Employment Needs and CETA
Program Planning

Boston, Mass.
April 10, 1980

Background

I appreciate the opportunity to speak to you today on the subject of employer surveys, in particular, on the National Occupational Coordinating Committee's (NOICC) interest and role in this area. The specific stimulus for my presentation is Title VII of CETA, as amended in 1978, which permits Private Industry Councils to implement employer surveys. I will take a somewhat broader view than the CETA legislation, since other programs in CETA and Vocational Education may be involved in similar efforts to develop information. There are really three purposes for NOICC's participation in this session.

- First, to present NOICC's position on employer surveys and to discuss their potential impact, both positive and negative, on the current state of occupational information development and utilization;
- Second, to highlight recent activities sponsored by the Labor Market Information (LMI) division of ETA and NOICC to provide assistance in the use of labor market information, and where necessary the development of information to supplement the existing LMI program and;
- Third, and perhaps most importantly, to enhance our understanding and awareness of local concerns, needs, and efforts to develop and use information for program planning.

There is a certain awkwardness in elaborating on this subject in New England, since, through the auspices of the Center For Labor Market Studies at Northeastern University, New England is already several steps ahead of NOICC, which I am sure is not surprising to you. However, New England is not necessarily reflective of the national picture; the extensive cooperative involvement of various programs/agencies that is occurring here, as demonstrated by this conference and a previous one held for Massachusetts planners cosponsored by the Massachusetts State Occupational Coordinating Committee (SOICC) and the Center, is not typical of all States and regions. It is clear that the NOICC/SOICC network should play an active role in providing a forum for discussing and providing guidance on the development and use of occupational information and to ensure that additional employer surveys by PIC's or other agencies complement rather than duplicate the existing information system. NOICC intends, in part, to build on the work being carried out in New England by encouraging SOICC's to implement similar conferences in other States. The proceedings of this conference (and the previous one) will be provided to all SOICC's, accompanied by guidelines for implementing similar sessions.

I will now focus on the subject at hand, employer surveys, and the role of the Private Industries Councils (PIC's) in information development activities.

Title VII of the CETA Amendments of 1978 introduced a new emphasis to CETA. Not only did it mandate and set aside funding for specific programs under Title VII, focusing on employment-related training and education for private sector job opportunities, but more significantly, it established as an ultimate goal, increased focus on private sector job opportunities across all CETA Titles. Title VII authorized the establishment of PIC's as the principal vehicle to meet this objective. While our immediate interest is with the CETA program activities, we should also keep in mind the private sector focus of vocational education.

The point is, a variety of programs intended to prepare individuals for occupations in the private sector exist and while PIC's are specifically authorized and charged to analyze private sector job opportunities, so are other programs such as CETA Title IIB. Reportedly , CETA Title IIB planners in some jurisdictions are involved in the planning of PIC activities. NOICC saw a clear need to coordinate, where appropriate, the development and use of occupational information required by programs training for the private sector, a role which could be fulfilled by NOICC and the SOICC's. Just as program planning should take into account other agency/program training and employment efforts in the area, information development activities should not be implemented in isolation - the SOICC provides an excellent forum for coordinating such efforts.

There are four reasons why the NOICC/SOICC network has taken an active role on the issue of employer surveys; they are as follows:

1. Title VII clearly indicated that PIC's were to analyze job opportunities in the private sector including estimates by occupation, industry, and location. While the regulations specifically indicated that such an analysis should make use of existing labor market information, e.g. the SESA, to meet the information needs - little guidance was provided beyond the CETA planning Technical Assistance Guidelines (TAG) as to how the analysis should be undertaken. NOICC sees itself and the SOICC's as playing a role in this realm by providing guidance in the development, analysis, and use of occupational information.
2. The Title VII legislation and regulations appear to leave open the possibility of PIC's developing occupational projections based on employer forecasts of occupational needs, a procedure that for several reasons may result in questionable results, as

discussed by Andy Sum in his presentation.[1] The NOICC/SOICC network will publicize the deficiencies of the employer forecast approach to projecting occupational demand, and encourage programs to channel their resources/efforts to other areas that may reap more immediate and significant benefits.

3. In particular, employer contact efforts to acquire and develop information on wages, promotion opportunities, ports of entry, training requirements, fringe benefits, career ladders, transferability of skills and other such information may be appropriate to fill existing information gaps. We encourage that any such efforts be coordinated through the SOICC and/or the State Employment Security Agency (SESA) LMI program to minimize duplication of effort and to ensure that these activities supplement the existing information systems. NOICC also wishes to avoid any potential adverse effects on existing surveys, e.g. the Occupational Employment Statistics (OES) survey, by minimizing the burden on employers being requested to provide employment data. Data developed through surveys coordinated with the SOICC and SESA may also provide valuable information that can be incorporated into the OIS. The NOICC/SOICC framework provides a logical base to address such issues and efforts.
4. To the extent that many programs, not funded through the Department of Labor, are involved in similar missions and activities, e.g. vocational education, the NOICC/SOICC network can provide a forum for interagency coordination, cooperation, and exchange of information.

I will now briefly present my impressions of NOICC's position on employer survey activities, emphasizing that NOICC has not established a formal written position to date. My comments, therefore, should not be construed as representing a hard and fast NOICC position. I believe, however, that they do represent a good indication of the general orientation that NOICC will take in the future with respect to employer surveys.

First, the issue of employer contacts/surveys must be examined from the overall perspective of their potential role in analyzing and identifying private sector job opportunities. From this viewpoint, I would offer that NOICC's position is as follows:

a. Employer surveys should supplement the existing LMI system. Employer contact strategies should focus on obtaining information on the internal labor market, as I noted earlier, such as job openings data, wage information, and training requirements.

b. If a formal employer survey is considered, the effort should be coordinated with the SESA LMI program and the SOICC:

   . to ensure that the desired information does not already exist or cannot be developed through other procedures.

   . to minimize potential adverse impact on the response rates of ongoing surveys such as the OES survey, which may result if employers refuse to respond because they are being oversurveyed.

   . to maximize cost efficiencies, i.e., each program should not start from scratch but should use or modify existing questionnaires if available.

   . to gain access to the ES-202 (through the SESA) which can be used to develop the sample for the survey, or receive assistance in the sample selection if the ES-202 cannot be released due to confidentiality statutes.

   . Employer forecasts of occupational demand, e.g., the area skill survey forecast, should not be solicited because of the questionable reliability of the results and the relatively high costs of such surveys. I again refer you to the points

Andy (Sum) made with respect to the inadequacies of the area skill survey approach and RAL 11-75 for further background on this issue.[2]

. NOICC encourages PIC's and other programs that are considering undertaking information development efforts to take a strong process orientation to determine whether the information is needed and how to best acquire the required data. By this I mean, the program should:

  - Carefully define the information needs from the perspective of the planning process, i.e., before seeking the data, the planner should determine whether the information may potentially impact on the planning decisions. In short there should be a real and defined need and value for the information.

  - Examine the existing LMI system, the SOICC occupational information system (OIS) and other data sources to determine whether required information is available, or whether significant data gaps exist.

  - Work with the SESA LMI program and SOICC to see whether data can be readily developed and what procedures are most reliable and cost effective.

  - If data are still not available, the information requirements should be reexamined to determine whether they are critical and/or whether alternative data can be used.

  - If an employer contact program/survey is needed, the planners should, to the extent possible, coordinate efforts with the SESA and SOICC.

NOICC and the ETA LMI program are aware that major information gaps and deficiencies exist and each office is taking steps to rectify these weaknesses; I would like to provide some illustrations of current efforts to improve the quality, value, and availability of occupational information. NOICC has formulated a policy position that the OES program is the principal source of occupational demand estimates and projections to be used by the NOICC/SOICC network in developing and implementing an OIS. We recognize that there are significant weaknesses in the program and have funded several efforts to address these problems including:

- Improving substate demand projections; projects have been funded through four SOICC's (Colorado, Texas, New Jersey and Oregon) to test the feasibility of using OES State survey data to develop reliable projections at the SMSA level. The simulation studies are being transmitted to BLS for their review and consideration to determine whether any of the approaches are acceptable and warrant transmission to the States for implementation nationwide or if further research is required.

- The Oklahoma SOICC is investigating the feasibility of adding employment sectors not currently covered by the OES to the program, such as:

  - agricultural workers

  - domestic household workers

  - self employed

- NOICC has funded BLS to develop an exportable software package to enable States to process the OES projections themselves.

The ETA/LMI program with assistance from NOICC is currently developing a monograph for PIC's and other programs on "The Use of LMI to Identify Private Sector Job Opportunities." This monograph will not only highlight the value of existing information but will also suggest how the PIC should implement an employer contact program, including the development of formal surveys. It may be encouraging to you to know that the employer survey section of the monograph is being prepared by Andy (Sum) and Paul Harrington of the Center for Labor Market Studies. The LMI program is also establishing a training program for PIC's on use of LMI, through its training contractor, North Texas State University (which is also preparing the final version of the monograph).

As I hope I have made clear, NOICC is not opposed to employer surveys. There are many types of data that may be gathered through an employer contact effort. However, NOICC does not encourage any agency to leap into survey activities, unless a clearly defined need exists. And then, we strongly encourage a cooperative involvement which includes the SESA LMI program and the SOICC. NOICC strongly supports the position that employer forecast type surveys should not be undertaken, as emphasized by Andy Sum and Bob D'Allesandro in their presentations earlier today.

Again, I thank you for the opportunity to speak to you. I realize that I have provided only a rough sketch of the major issues and our interests on the subject of employer surveys. I would be more than happy to respond to any questions you have now, or feel free to call and discuss these issues.

1/ See Andy Sum's presentation in this monograph.
2/ See Bob D'Allesandro's presentation in this monograph.

The OES Program and CETA Planning Information Requirements

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April 10, 1980

This paper is intended to provide a summary of the Bureau of Labor Statistics plans for the production of current and projected occupational employment statistics during the 1980's. In addition, I will attempt to relate my perception of the role that local employer-based surveys have in the CETA Title VII and IIB planning process. This discussion will involve the personal views of a BLS Regional Office economist -- not necessarily the official position of the Bureau. This distinction is, I believe, of real significance. I would contend that my communication with local CETA and vocational education professionals has been instrumental in helping to forge a personal perspective on these matters which is more realistic and more based upon a true understanding of user needs and concerns at the sub-state level.

The Occupational Employment Statistics (OES) Program is the major Federal-State cooperative statistical program which is designed to yield information on current and projected employment demand by occupation. In all states, Employment Security Agency (SESA's) research units implement methodologies and procedures which are designed by BLS. The Bureau Regional Offices provide technical assistance to SESA's and are responsible for monitoring and validating state program activities.

The OES Program actually consists of three closely interrelated components: 1) the OES Survey, 2) the Industry-Occupation Matrix, and 3) industry and occupational Employment Projections. Within the next 2-3 years, a Job Openings Survey may also become a part of this broadly-defined OES Program. State funding for the Matrix and Projections components of the Program comes directly from the Employment and Training Administration LMI grant. Funding for the

OES Survey in the New England States is fragmented. In Maine and Massachusetts, money for survey operations is also part of the LMI budget. However, in the remaining four states current funding for the survey comes primarily from the State Employment and Training Council via the 4% Governor's Grant monies.

The OES Program has undergone considerable change during the past two years. Some of the major procedural and technical program improvements have yet to be completed. Very little of this work -- conducted primarily by the BLS Division of Occupational Outlook -- is reflected in the OES information currently available in New England state agencies.

The most extensive and significant change in the program involves the integration of OES Survey data into the matrix and projections components of the system. It is around this important development that all of the other technical and methodological changes now underway have revolved. What has been accomplished is, conceptually, really very simple (in practice, unfortunately, the system has taken several years to perfect). The industry-occupation matrix, which is the basis for current and projected employment estimates, has been revised to incorporate OES Survey data in place of the refined census information formerly used. The effect is to replace data concerning the industry and occupational attachment of the employed collected from households during the 1970 Census with data collected from an employer survey. This establishment-based information is demonstrably better (i.e., of higher quality, detail, and reliability) than that collected from a sample of household respondents.

Two states in New England, Massachusetts and Maine, had a sufficiently long time series of OES Survey data to produce a new OES Survey-based matrix during 1979. This matrix has a base year of 1976. In addition, Maine also used this information to produce industry and occupational projections to 1982 for the state and for the six largest counties. However, a very important limitation of the method employed to produce the projected employment dates was recognized: "static" staffing patterns were used. This means, simply, that the occupational staffing ratios by industry that were observed in the surveys making up the 1976 matrix, were assumed to also prevail in 1982. Numerous studies have shown, however, that staffing pattern changes over time are a very important factor in the future employment demand by industry and occupation. Thus, projections which resulted from this initial survey-matrix, while still valuable, have had to be interpreted with caution.

The next "official" round of industry/occupational projections work is scheduled to commence in October 1981 (the beginning of FY 1982). At this time, important refinements of the program will be introduced. In addition to the inclusion of more recent OES Survey data in the base-year matrix, the wage and salary employment data from the survey will be supplemented with census and special study information to allow an estimate of total employment. This total employment number (absent from the survey-matrix produced in 1979) will include an estimate for the self-employed, unpaid family workers, and agricultural (as well as a few other industries only partially covered in the survey) workers. The most significant improvement in projections methodology which will be in evidence in the FY 1982 round, however, involves the replacement of static staffing patterns. Testing is currently underway in the BLS

National Office on a methodology to be used in projecting occupational ratios for the 1500+ OES Survey occupations within 350+ industries.

Also available to states beginning in FY '82 will be a vastly expanded computer processing capability. In years past, SESA's have utilized, through the BLS Regional Office computer terminal, the Data Analysis System for Industry Employment (DASIE). The DASIE modules are designed to aid states in the statistical analysis of past industry employment trends and the projection of this employment. For the actual processing of this industry employment data through the matrix and the production of occupational projections, however, states have had to rely on the BLS National Office. Beginning in late 1981, if contractual work funded by a National Occupational Information Coordinating Committee (NOICC) is completed, states will have access to the entire industry/occupational processing system outside of BLS (in SESA's and through a private vendor). The development of this exportable system will free BLS staff to devote more time to program research and will give states greater flexibility in the frequency and scope of their OES work.

The FY '82 round of projections will have a base year of 1980 and a projections year of 1990. For more short-run planning purposes interpolated information will be produced. The methodology developed by BLS and the data bases available in the states will support reliable employment projections for states and major sub-state areas (usually with populations of at least 50,000). Although OES Survey data is, in New England, usually available only for the entire state it is anticipated that within the next year a method for using this data to produce sub-state estimates of acceptable reliability will be available (at the present time NOICC is funding work in two states to develop an acceptable method). The long lead time before the next "official" projections round is necessary because the extensive methodological refinements are still some months from completion. If all does come together as planned, however, the FY 1982 effort will represent the first comprehensive projections cycle focusing on survey-based data. Although states still will have the option of producing some projections in the 16 months between now and the commencement of 1982 work, most OES projections activity will be discouraged during this interim period. The limitations of the projected data resulting from the application of static staffing patterns have already been acknowledged. However, for the limited number of states that have a genuine need for an initial survey-based matrix, information can be produced (base year-1978; projections year-1985).

In summary, a great deal of long range OES Program planning is taking place within BLS. This represents a significant and welcome change from the year-to-year developmental approach of the past decade. Very intensive research work is beginning to take place within the Division of Occupational Outlook and proposed methodological improvements have met with the approval of Regional Office and state staff. Most important is the conceptual integration of OES components. After several years of developing a vague sense of how the pieces fit together, the federal/state partners in OES can finally see tangible evidence of an integrated and methodologically sound program. The implications are clear; OES is finally at a point where all of the potential for a comprehensive occupational demand system, long embodied in the program can be realized.

The OES Survey, in conjunction with the matrix and projections information that is directly related to the base data collected, represents a comprehensive, well-designed, standard method of producing occupational demand information. OES produces information using standard concepts and definitions and consistent methods and procedures in all New England states. It is, in short, the most definitive employer-based survey currently in existence. Although very little local information is produced by the states in this region the system does not preclude this possibility. In many other states around the nation reliable sub-state information is now produced. As previously noted, a method for accomplishing this with a minimum of effort is being developed in two pilot states.

Given the fully-functioning and constantly-improving OES Program, the prevalent attitude within an isolated BLS National Office is not surprising -- "Why is there any need for other local employer-based surveys?" "Time, effort, and scarce financial resources should not be wasted on these duplicative efforts and federal/state staff should neither cooperate nor become involved in such undertakings." The attitude of those working closer to the state and local users is, of course, much different. Most Regional Office staff, and all cooperating OES state personnel, have an understanding of the need for the supplemental employer surveys being conducted by prime sponsor or PIC staff.

A realistic assessment of the current status of the labor market information base leads one to the obvious conclusion: industry and occupational employment information needed for comprehensive planning purposes is only partially supplied by current OES efforts. There will continue to be a need for abridged, supplemental employer surveys at least until the Occupational Information System currently being developed by SOICC's is a fully functioning reality (in fact, at that future time we will probably find that these sorts of employer surveys provide information essential to a comprehensive OIS).

There is, at the present time, no comprehensive information base for planning purposes. The "gaps" in the system can largely be filled only through local employer surveys. Information on the training policies and hiring patterns of local firms, on the hiring requirements for entry-level occupations, and an understanding of the internal labor markets in individual firms is absolutely essential for comprehensive planning based upon a complete understanding of the local labor market. Recognition of the fact that certain very important information needs are unfulfilled by OES data is the first important step towards the acceptance of supplemental employer surveys. This acceptance inevitably leads to the support of, and cooperation in, these efforts.

I, as a BLS Regional Office representative, recognize the need, at least at the present time, for specialized employer survey information. Whether one calls these efforts "abridged surveys" or surveys to provide "supplemental information" the need to fill gaps in the existing labor market information is very real. In addition, informal surveys can provide still other information and fresh perspectives on labor market problems. Telephone surveys of selected local employers, reviews of employer job orders, and input from local employer advisory councils can all provide information of use in the planning process. In undertaking all such efforts, however, the surveying agency must develop and maintain a clear understanding of the goal(s) desired. Since employer surveys will, and should, be done, my primary concern is that they be done well. Consistent methods and procedures related to a well-designed survey (such as those outlined by Paul Harrington in his presentation) are the hallmarks of a "good" survey -- i.e., one producing information which is statistically valid and of value in the planning process. Surveys which are properly designed and executed will always have a place in our developing occupational information system.

In summary, I would like to encourage prime sponsors, PIC's, and all users of occupational information to become more aware of the very good and very detailed data now available from the OES Program. An understanding of information available either in published form or from summary computer listings within the SESA is essential for an informed identification of the "gaps" that currently exist. Cooperation with the SESA research unit before and during abridged survey efforts is also strongly encouraged. The substantial amount of useful information "hidden" within the agency would, I believe, pleasantly surprise most users. In addition, the expertise and competence of most research staff represents a valuable resource which should be tapped before undertaking any significant amount of formal or informal survey work.

Finally, PIC's and prime sponsors should, in all cases, work directly with and through the SESA when the primary purpose of a contemplated survey is to produce current or projected occupational demand information. The OES Program is now, and will continue to be, the best source of this specialized information. Users should formally endorse the OES efforts of their SESA research unit and should help in any way possible to enlist the cooperation of employers in the survey effort. In addition, OES Program funding from national sources is, at present, pitifully small. In most cases, the New England states are not funded at all for OES Survey operations by either BLS or ETA. As a consequence, SESA's are in need of any financial resources which may be available from CETA, Voc. Ed., or other user agencies. Using the expertise of research staff and the already existing data sources (especially the ES-202 employer file) is the most cost-effective way of producing local industry and occupational employment demand information.

When properly designed and implemented, supplemental employer surveys can fill most of the labor market information "gaps" that currently exist. I support and encourage these efforts. However, for determining current and future training needs of local employers OES must be recognized as the only comprehensive and reliable source. Unfortunately, the full potential of OES has not been realized in most states. The prodding, encouragement, cooperation, and financial support of users can provide the impetus needed to eventually accomplish this desired goal. OES is the core of occupational demand information within the Occupational Information System. With the cooperative efforts of data producers and users, information can be produced which will ensure intelligent and effective program planning. At that point, the ultimate users of our information -- the students, unemployed, and economically disadvantaged in our society -- will be properly served.

The Regional Office Perspective on
PSIP and Title VII Planning

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April 10, 1980

Introduction

Although the theme of this conference is fairly specific, it is useful to put the issue of employer surveys and planning for the Private Sector Initiatives Program into a broader context. Having done this, one can then review the existing DOL policy regarding the technical aspects of employer surveys and the role various agencies in our system have in developing, conducting and analyzing employer survey information.

The passage of Title VII of CETA with its major programmatic emphasis on intervention in and cooperation with the private sector, is probably one of the most significant developments since CETA was first passed in 1973. The fundamental rationale behind it is that if our programs are to work, in the sense of helping individuals or (if one wants to view it simply as a matter of self-interest), if the employment and training system is going to survive as a viable institution, there has to be an understanding of the private sector of the local labor market and there has to be effective cooperation between the two sectors.

Within this overall framework is the need for a timely and reliable mechanism, or system, that provides the information needed to accomplish the various programmatic tasks.

Hopefully, if we view the PSIP approach in this broader and long range context, it will help us appreciate the significance of various day to day and week to week activities associated with this new program/approach.

DOL Policy on Employer Surveys

The most explicit and detailed policy statement relating to the development and use of employer surveys can be found in two Reports and Analysis Letters (RALs) issued by DOL in 1975. The first RAL 11-75 deals with the official DOL occupational manpower projections methodology. The primary purpose of this directive was to:

a) establish the industry-occupation matrix as the official BLS (i.e. DOL) methodology for generating employment projections;

b) explicitly prohibit the use of employer based surveys for making projections;

c) refrain from developing official projections for any geographic area smaller than the labor market area.

The practical effect of this directive was to establish the Occupational Employment Statistics (OES) Survey as the only accepted employer based survey for input into the occupational projections methodology.

Although this policy was established in 1975, the issues raised are, if anything, more valid in 1980, given the new emphasis of the Private Sector Initiatives Program (PSIP). The new emphasis on "determining private sector training needs" has resulted in a widespread effort among prime sponsors to develop and conduct various types of employer surveys. The critical issue is what types of employer surveys should be conducted, for what purpose, and by what agency. The 1975 prohibition of employer based surveys for the specific purpose of developing manpower projections was issued after long and extensive research in this area. It was the vast consensus of academics and practitioners that the technical flaws in the methodology and the actual conduct of employer based surveys were serious enough to prohibit their use by SESAs in

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developing occupational and industrial projections. However, the RAL did cite the validity of conducting "abridged" employer surveys for special purposes. It seems that this is the crux of the issue. The PSIP approach requires prime sponsors to gain a more detailed understanding of the private sector of the local labor market and therefore some type of employer surveys will be necessary. But the Employment & Training Administration position on this matter is that the original policy, directed only to SESAs at the time, is still valid.

Practically speaking, this means that prime sponsors should, at a minimizing consult with the Research Director of their respective SESA and determine what information is already available. The SESA Research Departments collect a great deal of information from private employers on a regular basis and in many instances there is no need to conduct a further survey. If a survey is warranted, the SESA Research Departments can also be of assistance.

Another dimension to the issue of employer surveys is the possible disruption of ongoing statistical surveys which the SESAs are required to conduct. This point is emphasized in RAL 13-75 and ETA believes that it is even more valid now than it was in 1975. There is a growing resentment among many employers over the excessive requests for information by various government agencies. Poorly designed and duplicative surveys exacerbate this situation and potentially jeopardize ongoing employer surveys such as the Current Employment Statistics (CES-790) Program, the Occupational Employment Statistics (OES) Survey or the Labor Turnover Statistics (LTS) Program. This is another reason why we believe prime sponsors should be aware of the various technical issues involved in designing and conducting employer surveys and also why coordination with appropriate agencies within their respective, state is essential.

Employer Surveys - What's Available From the DES

Prepared by:

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February 13, 1980

The lesson of the 1970's is that resources are scarce. We are going to have to learn that lesson and apply it with diligence during the 80's, 90's and 21st century.

This conference and the publications which will result from it focus on the subject of employer surveys: the history, design and implementation of employer surveys; the legislative mandates which have created employers surveys; and, from the Division of Employment Security's (DES) perspective, the coordination of the existing employer survey programs with those which can and will be carried out by CETA Prime Sponsors, Private Industry Councils (PIC) and other groups.

My goal is to provide you with an overview of the programs and products which are operated and produced by the DES. Armed with this knowledge, surveys carried out in the future by groups such as this should compliment and supplement the work already being done. If we do not learn the lesson of the 70's - that resources are scarce and must be used carefully and effectively - we will discover that the effectiveness of the entire Employment and Training system is limited.

The Massachusetts DES carries out both industry and occupational employment surveys. Some of these provide information for sub-state areas while others have data only for the entire state. Because these surveys are carried out by the DES as part of the cooperative federal/state program, our methodologies and survey instruments are consistent with those used in all states. This means that inter-state as well as intrastate data can be compared. There are three primary sources of industry employment data, each of which is broken down by sub-state area: The Current Employment

Statistics (790) survey, the Unemployment Insurance Operations (202) program and the Labor Turnover Statistics (LTS) survey.

The Current Employment Statistics (790) survey provides monthly estimates of total nonagricultural employment and of production workers, hours, and earnings. Until 1980, this survey was carried out for the state and only eight of the major labor areas; this year we will be adding two additional areas, Pittsfield and Fitchburg-Leominster. This program provides the most current data available on nonagricultural employment in the nation and each of the states, and is used as one of the leading economic indicators. The monthly employment figures from the Current Population Statistics (CPS) survey are regularly compared to the 790 figures as economists struggle to interpret the economy and the unemployment rates. In Massachusetts, these data are the Employment Review, which is available approximately three months after the close of the reference month.

The second major source of industry data comes from the operation of the Unemployment Insurance program and is referred to as the 202. This program collects total employment for individuals covered by the Employment Security (ES) Law. In Massachusetts, there were approximately 126,000 covered employers with a total employment of 2.5 million in March of 1979. Of those, 94% of the employers have fewer than 50 employees. These establishments employ only 30% of the total covered workers. Data are collected quarterly for monthly employment and quarterly total and taxable wages. Tabulations of employment and wages are made by industry at the two, three, and four digit Standard Industrial Classification (SIC) levels. They are also made by area and by establishment size classification.

Summary data are published, but detailed data are available in the DES library in the Government Center Hurley Building. A primary function of the 202 is to serve as the sample frame for all of the Division's survey programs.

The final industry employment survey is the Labor Turnover Survey (LTS). This survey collects accession and separation data by industry for the state and seven major labor market areas. Accessions are separated into new hire and recall components while separations are divided into quits and layoffs. The relationships between the employer initiated components and those initiated by the employee provide additional insight into the status of the business cycle. This survey currently covers only manufacturing industries, but over the coming year we will continue our expansion of the sample to collect nonmanufacturing data. This effort was begun a year ago as part of the Job Opening Survey pilot tests.

OCCUPATIONAL EMPLOYMENT SURVEYS

There are four programs based on occupational patterns. The first is the Occupational Employment Statistics survey more commonly known as the OES. Under this program all industries are surveyed in three-year cycles. The survey forms used are tailored to the occupational categories within each industry or industry group. This series of surveys produces occupational profiles by industry and includes approximately 2400 occupations. Once developed, occupational profiles can be applied to the industry employment or projected employment in order to determine an approximation of occupational demand within an area. Our current efforts on the OES are the education, government, trade, and regulated industries surveys which we expect to be completed and published within the next six months. At that time we will begin a new manufacturing survey.

Copies of most of the older surveys are available for people interested in a particular industry. These include government (75), trucking (76), trade (76), manufacturing (177) and nonmanufacturing (78).

The second program is the Occupational Employment Matrix for Massachusetts. This is based on the Occupational Employment Statistics survey but is supplemented with non-survey data from the Census and other sources to include occupations not covered by the surveys. The OES based matrix differs from earlier Census based matrices in several ways. Of particular consequence are the differences in employee versus employer definitions of a job classification, uncoded versus pre-coded job classifications, and the "people" concept versus the "job" concept for classification. Under the Census matrix people were counted once, in their primary job; the survey matrix counts primary and secondary jobs equally. Nevertheless, this statewide matrix is the most detailed matrix ever available from any source. It combines 1600 occupations with 361 industries. It's earlier Census-based counterpart combined 377 occupations with 201 industries. One reasonably serious drawback of this matrix is the mixture of the 1972 SIC system for trade and regulated industries with the 1967 SIC system for all other industries. Employment in Massachusetts is concentrated in white and skilled blue collar jobs.

Third, is the Occupational Projection program, the most recent round of which contains projections to 1985. They cover 377 occupations and 201 industries. Occupational projections are generated by taking current industry employment, projecting future industry employment and processing the industry projections through an occupational matrix. Our current industry/occupation projection publication has been on the best seller list for months and we are into our third printing. Obviously, occupational demand data are critical to the formation of employment and training policy and programs.

The final occupational employment program is the Job Opening Survey. Massachusetts is one of four states doing a pilot test of our ability to collect valid data on jobs currently available within the state, at a reasonable cost. The pilot program includes 1200 firms from whom data are collected on a quarterly basis. A report on the technical aspects of survey solicitation and collection is available. We anticipate a major publication on Job Openings soon and it will contain data for the first three quarters of 1979. Because this is a pilot program it has taken a significant amount of time for Washington to develop the computer programs with which to process the data. At the time of this writing the processed data were not available, but we do expect it to be ready for a late summer publication.

PUBLICATIONS OF INTEREST

In addition to the publications from our regular monthly and survey programs, the Massachusetts Division of Employment Security produces a wide variety of periodic publications. Many of these are of value to planners both within the employment and training system and without. Periodic publications include Annual Planning Information Reports (APIR's) for the state and each of the 10 major labor areas. During the past two years, we have produced annual planning reports for many of the minor labor market areas also. Vocational

Education Planning Reports are available for all of the major labor areas as are target group reports on such diverse groups as the handicapped, the disadvantaged, youth and women, and veterans. In the last two years we have produced papers on mini computers, scientific instruments, fishing, tourism, and the paper industry, but we expect that number to increase as our program of industry reports expands in the coming years. Finally, a report of particular importance and interest to planners contains Populations and Labor Force Projections to 1990.

I have tried to provide a brief summary of the programs and publications undertaken by the Massachusetts Division of Employment Security because it is in everyone's best interest to utilize available data whenever possible. As employers work to conserve their resources, some have come to view employer surveys as a burden rather than benefit. There is an increasing reluctance to involve management information systems or employees with participating in governmental surveys.

It is important, however, for everyone to utilize available data whenever possible. No one can afford to start from scratch, start with research. An employer survey should not be initiated that will duplicate data which is already available. In fact, such a new survey might even cause problems for current ongoing programs. Anyone doing such research should be sure that hypotheses are carefully defined and that the survey instrument will produce data which support or disprove them. The Division of Employment Security not only has publications but is available to provide technical support. The Northeastern Institutional Grant staff, and the Massachusetts Occupational Information Coordinating Committee staff and the

Department of Manpower Development Research staff are also all available for help.

In conclusion, we at the Division of Employment Security, not only wish to provide publications but to be responsive to the many needs of the employment and training system. In order to do this effectively, we need your input. We need your constructive comments on our publications and our programs. There are many areas not covered by current surveys, areas about which the information would be of value to you and to us. Accordingly, when you design your survey, think first of what the data will be used for and how it will be used, and then when the survey is complete and the results are written up, please send us a copy.

Section Three: RECENT STATE AND LOCAL EXPERIENCES IN THE DESIGN AND USE OF LOCAL EMPLOYER SURVEYS

THE ROLE OF ESTABLISHMENT SURVEY
IN THE
POLICY FORMULATION PROCESS

Prepared by:

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April 10, 1980

Local jurisdictions are better able to define their needs and to design program activities which can impact upon those needs. This assumption underlies the decentralized implementation philosophy inherent in the Comprehensive Employment and Training Act (CETA). For local delivery systems to be effective, policy formulation must rely upon labor market information as the basis for a clear definition of need and an appropriate design of program activities. The availability of useable labor market data evolves as a critical issue in the process of rational policy formulation.

Although caveats still exist, data availability has greatly increased since the inception of CETA. The Division of Employment Security and Bureau of Labor Statistics regularly publish reports and newsletters which are useful to local labor market analysts. A myriad of data packages have been produced by the Policy and Evaluation Unit of the Massachusetts State Employment and Training Council and by the Center for Labor Market Studies. This information has greatly improved the development of employment and training programs that are capable of addressing structural labor market dysfunctions.

Serious data problems persist in labor market areas with population levels between 50,000 and 250,000. Compression problems preclude the generation of accurate data for small sub-state areas from research models designed for regional or statewide application. To overcome this constraint, planners must resort to data generated from alternative information systems that can supplement the information available through conventional sources. Creative application of local establishment and household surveys produce area-specific labor market information that is necessary for sound policy formulation.

This paper is focused on the planning and implementation process for local establishment surveys. It is descriptive of the survey conducted by the staff of the Fall River Prime Sponsor during its planning cycle for fiscal year 1980. A discussion of the purposes which underlie the survey is followed by a description of the internal planning issues that are critical to successful implementation.

The implementation process is described with the benefit of experience to enable the reader to gain a perspective of the importance of structure and follow-up. Finally, the paper presents a series of data usages for short and long term policy formulation.

Purpose

Prior to its designation as a Prime Sponsor in fiscal year 1978, the Fall River Consortium had developed a limited planning capability which was reflected in the mix of services funded under Title I. Work experience and public service employment programs dominated the enrollment levels. Institutional training consisted of a disjointed collection of individual referrals to private proprietary schools in occupational areas that had little relationship to the prevailing labor market conditions. The appointment of a new CETA Director resulted in reorganization that was intended to expand the availability of training opportunities in high demand occupations. This decision assumed the need for rational policy formulation process and the analysis of local labor market conditions. The availability of reliable data represented an immediate problem.

Existing sources were utilized to the extent feasible yet the information void, as described above, constrained the analytic process. Information regarding the availability of job openings, private sector recruitment methods, internal career ladders and prevailing growth conditions were not readily at hand. Employment forecasts published by the Office of State Planning were inadequate to depict high demand occupations. It was apparent that supplemental data sources were needed to maximize the expenditure of training resources. The concept of local survey techniques was discussed within the senior staff with a proposal to conduct an establishment survey developed thereafter.

The employer survey was designed to compensate for existing data gaps in the plannning and decision-making process. By supplementing data acquired from conventional data sources, the Prime Sponsor was better prepared to stipulate the labor market problems confronted by the disadvantaged population. Program activities could be designed to address the dysfunctions and facilitate placement into unsubsidized employment.

An equally important purpose of the establishment survey was the determination of prevailing attitudes within the private sector regarding CETA funded training activities. Data reflective of the willingness to participate in subsidized training activities were generated from the survey. It was a useful mechanism to identify establishments which encouraged internal mobility and human resource development.

A third purpose of the survey was the need to define the components of recent and projected employment demand in terms of the contrast between growth and occupations and replacement demand.

Finally, the survey represented a valuable resource to the job development and on-the-job training units. As vacancies were detected, referrals could be coordinated within the Prime Sponsor network to assure timely response.

To summarize, the establishment survey provided decision-makers with timely and accurate data to supplement existing data so as to optimize the allocation of training resources. It was an effective methodology to assess private sector attitudes in addition to defining local employment conditions. The survey results facilitated job development activities and the policy formulation process.

Planning Issues

Of critical importance to the success of establishment surveys is the commitment of local decision-makers to support the project during its implementation phase and to utilize the survey results in the policy formulation process. Without that commitment, survey projects are doomed to failure. To insure the support of decision-makers, planners are well advised to pursue the project in a manner analogous to the grant application process. The Directorate must be convinced that the expenditure of administrative resources for planning purposes will result in tangible benefits to the organization. This implies the need to prepare a detailed description of the survey project including the proposed staffing pattern and cost consideration.

This proposal should stipulate the existing justification for a survey and the anticipated benefits to be accrued. Since staffing is critical to successful implementation, the proposal should stipulate the projected workload and personnel requriements.

Cost projections should consider not only staff considerations, but also the cost of supplies, data collection, tabulation and report generation. Also to be included is a timetable for implementation and reporting.

Within the description of operational issues, analysts should consider the importance of staff orientation and training to the project's success. Inadequate staff training can result in sub-optimal implementation and result in significant data problems.

Once prepared, this survey proposal should be presented to the decision-makers for review and discussion. Acceptance of the utility of the concept and commitment to support the project both financially and institutionally must be acquired to assure programmatic success.

Implementation

Development of an objective survey instrument is important to insure the collection of data that fulfills the organization's needs. In Fall River, the planning staff prepared a draft questionnaire with the technical assistance of the Policy and Evaluation Unit of the SETC.

The instrument is comprised of four sections that are differentiated by informational content. Section I includes basic identification data including the name of the establishment, its industrial code and contact personnel.

Section II is focused on the establishment's employment level over a fixed term and attempts to identify causes of change. Also included are questions pertaining to plans for plant expansion and employment increases. Where establishments indicated planned employment growth, the instrument is designed to capture the occupational title, growth and replacement components of the projected demand, the amount of experience required to fill vacancies and the starting hourly wage.

The third section of the instrument is targeted to company recruitment policies and expectations about new hires. This information is useful in determining the degree of supplementation anticipated from the data. It also indicates the existance of internal career ladders and ports of entry for training workers.

Attitudinal issues are the focus of Section IV of the instrument. Questions are designed to assess the reputation of federally funded training programs within the private sector. Also, the instrument is useful in identifying the willingness of local establishments to participate with the employment and training system.

Establishment List

Having completed the design of the survey instrument, a list of establishments was developed from various industrial directories. One primary source was a printout of standard industrial codes and establishments provided to the Prime Sponsor by the Policy and Evaluation Unit of the SETC. That included the corporate headquarters and local subsidiary establishments in Fall River with a cross tabulation by employment level. A second source of establishment data was the Chamber of Commerce membership listing. A third source was the Industrial Development directory of local industrial employers.

These sources were cross-referenced to eliminate duplicate contact and to produce a master file of establishments. This file was classified according to the specific employment levels by establishment. A 10% sample from each principal classification was selected at random to test the survey instrument.

The information pertaining to local establishments is useful for application beyond the purposes of the survey. In particular, the data is descriptive of the composition of the industrial and commercial economic base. A clear understanding of these components is important to the design of appropriate training strategies.

Included in the appendix (Table III 2) is the actual distribution of the firms surveyed according to employment size and geographic location. It suggests that Fall River's labor market is dominated by small establishments with employment levels below 50 employees.

Staffing

A total of 210 establishments were contacted during the survey period by a staff of three. The plan was to conduct the survey over a two month period with individual case loads of 70 establishments per interviewer. This ratio of 70:1 was developed on the assumption of arranging for two separate interviews per day allowing for travel time, computation and data collection.

An expedient method of employer contact is to utilize existing job development staff to conduct interviews. This method capitalizes on the rapport that should exist between an effective job development unit and the business community. Furthermore, it provides job developers an opportunity to experience direct contact with local employers.

Daily activities included telephone contact to schedule future appointments with employers, actual interviews and data collection.

Process

Prior to the implementation of the survey, media promotion was pursued to introduce the concept to the business community. Letters were distributed to each establishment from the Mayor's Offices, in his capacity as the chief elected official in the Consortium.

Introductory letters were mailed in batch format approximately two weeks prior to the desired interview date. Appointments were arranged by telephone at least one week in advance of the interview.

An important detail in the appointment process was the identification of the contact person in the particular establishment to be surveyed. A greater rate of successful contact was attained when the interviewers could request to speak with a specific personnel director by name. Otherwise, clerical staff tend to filter the information regarding the purpose of the appointment which can lead to non-response.

As indicated above, a 10% sample was implemented to test both the instrument and the process of employer contact. After having successfully verified the system, the complete survey process was activated.

Critical to the success of the survey was the staff orientation and training conducted prior to its initiation. Interviews were briefed regarding the intended usages of the survey data. Training was provided in terms of interview techniques and data collection. The importance of objectivity and accuracy in recording solicited responses was stressed throughout the orientation period. Each interviewer was involved in the development of the survey.

At the establishments, a directed interview format was selected to expedite the data collection process and to minimize the inconvenience. It was beneficial to provide the person being interviewed with a copy of the survey instrument. This helped to reduce misinterpretations. Where as the instrument had been subjected to a bias test, each question could be approached objectively and in an issue specific manner.

The interviews required a time commitment of approximately thirty minutes. In retrospect, the survey assumed a level of understanding of the components of demand that did not necessarily surface in certain establishments. Specifically we found that personnel managers did not always analyze their demand projections in terms of new and replacement components. Consequently, the quality of information obtained from demand oriented questions was suboptimal.

Data collection and tabulation was a manual process whereby interviewers transferred recorded information on to permanent records. The availability of computer hardware for data processing was not pursued because of the relative project size. Since the survey involved approximately two hundred establishments, manual tabulation was a practical and cost-effective alternative. Responses to each question are included in the appendix.

Tables III-1 and III-2 focus upon the distribution of establishments by employment level and geographic location. The labor market implication of their data were highlighted earlier.

Table III-3 is a distribution of job openings by occupational titles and demand characteristics, while Table III-4 is focused on recruitment methods within the respective establishments cross-tabulated by employment level.

The remaining supplements are the recorded response to questions 12 through 25 respectively.

Reporting

Two distinct series of reports were generated by the survey team. Management oriented reports were submitted on a monthly basis to update the directorate as to the status of the survey. Quarterly summaries were also prepared during the planning, orientation and tabulation phases of the project. In addition, a direct line of communication was established between the survey team and the job development unit for immediate referral against identified job vacancies. This network proved valuable for placement purposes.

Data Usages

The utility of establishment surveys is realized when outputs and conclusions are integrated into the decision-making process as the basis for policy formulation. This axiom is central to rational decision-making models. A commitment to rely upon labor market information is essential to the design of employment and training programs. From an operational perspective, application of the data for planning purposes is a demonstration of the commitment to rational decision-making.

In many jurisdictions, programs are initiated with limited understanding of the prevailing labor market conditions. Attempts to provide client oriented services that are consistent with existing needs in the private sector will be suboptimal without a thorough understanding of the market dysfunctions. Establishment surveys provide decision-makers with insight as to the nature of labor market barriers and supply/demand imbalances.

Survey data represents a variable that enables program administrators to define their needs and to design an appropriate mix of services. To elaborate, survey data is useful to identify the basis of unemployment, be it structural, aggregate demand or dual labor market related. This definition of unemployment in turn suggests alternative program design models that are appropriate to combat specific problems.

The most immediate institutional application of the survey data in Fall River was the fiscal year 1980 Master Plan submission. In addition to the conventional analysis of employment changes by industrial sectors and a description of the characteristics of the unemployed population, attention was focused on the survey data and its implications for program design. The data suggested need to address short-term replacement demand to preserve the existing economic base. It also indicated the more serious problem of limited growth and the implications there associated.

It should be apparent that the application of survey data has both short-term and long-term implications for decision-making. In the short-term the data is useful for labor exchange purposes and to identify particular private sector needs for trained personnel. Since employer specific data is not generated for smaller sub-state jurisdictions, survey instruments constitute a practical methodology to derive that information. The survey is a tangible demonstration of private-public sector cooperation.

Equally important is the long-term potential the survey data represents. By assisting local analysts to define existing and projected conditions, survey data in conjuction with conventional information illustrate the policy options that are available to program operators. In Fall River, the analysis of employment trends and prevailing conditions demonstrate the clear need to attract new and diverse employers into the region. This implies the need for employment and training programs to work closely with economic developers to facilitate employment growth.

Conclusion

Local establishment surveys are a practical way to supplement existing information systems toward the objective of increasing the awareness of program operators of the labor market realities that affect their agencies. The mechanics of conducting an establishment survey is within the realm of feasibility for Prime Sponsors in small sub-state areas.

The process involves planning to attain executive level support and planning for specific implementation. Emphasis on the importance of executive support cannot be understated. It is critical to operational success.

Most important, however, is the ultimate application of the survey data in the policy formulation process. Rational decision-making based on cybernetic planning models where survey data, in conjunction with conventional data sources, constitutes the basis for policy formulation is a pre-requisite to successful program operation. Survey data is applicable to both short and long term policy formulation. To be useful, it must be integrated into each decision to maximize the effectiveness with which public training resources will be expected.

APPENDIX

SURVEY OF LABOR MARKET CONDITIONS

THE FALL RIVER LABOR MARKET AREA

Interviewer____________________

Date__________________________

I.

1. Company Name__________________________________
2. City or Town__________________________________
3. Code Number of Firm___________________________
4. S.I.C. Code___________________________________
5. Parent Company________________________________
   ____
6. Person Interviewed____________________________
7. Job Title_____________________________________
8. Telephone Number______________________________

II.

9. Employment Level January 1978_______________
10. Present Employment Level_____________________
11. Explain the difference in the employment level________________________
    ____
    ____
12. Do you plan to hire any new employees during the upcoming 12 months?
    Yes________ No________ If yes, in what categories?

Category	# Net Growth	# Replacement
Supervisory		
Clerical		
Skilled Labor		
Unskilled Labor		

13. For each category, please estimate the specific occupations:

Dot	Occupation	# Growth	# Replacement	Experience Needed	Entry Wages

14. Does your company have plans for plant expansion? Yes_____ No_______

If yes, When?________________________________

How many jobs will be created?________________

III.

15. How many new employees did you hire in the last 12 months?___________

Category	#
Supervisory	
Clerical	
Skilled Labor	
Unskilled Labor	

16. When did you last hire five or more employees at the same time?

A) One week __________

B) One month __________

C) Three months __________

D) Six months __________

E) One Year __________

F) Never __________

17. How are employees recruited for available job openings?
(Estimated Percent Distribution)

A) Want Ads

B) Private Employment Agency

C) State Employment Service

D) Schools

E) Word-of-Mouth

F) Walk-ins

G) Other____________________

18. How are vacancies in non-entry level positions filled?

A) In-House Promotion

B) Staff Retaining

C) Outside Sources: (specify) ______________________________

19. What qualities do you seek in a job applicant as being related to successful job performance?__________________________________

____

____

____

20. Does your company employ persons between the ages of 16 - 21?

Yes_______ No_______

If yes, in what occupations?__________________________________

____

21. Does your company list specific job vacancies with the State Employment Services Job Bank? Always_______ Sometimes________ Never________

IV.

22. Has your company ever participated in a federally-funded training program? Yes______ No______ If yes, which program:

CETA__________ META__________

CEP __________ NABS__________

MDTA__________

Comment:____

____

____

23. Would your company be willing to participate in a CETA funded training program? Yes______ No_______ Under what conditions?_______________

____

____

24. Would your company be willing to develop a training curriculum for specific occupations? Yes_____ No______

25. Would your company be willing to hire CETA participants who were trained in a course which was designed and operated by your company on a cost reimbursement basis? Yes______ No______

Table III-1 DATA ARRANGED BY SKILL LEVEL, LOCATION, NEW (N), AND REPLACEMENT (R) DEMAND

CATEGORY		Fall River		Freetown		Somerset		Swansea		Westport		Totals		Totals	
		N	R	N	R	N	R	N	R	N	R	N	R	No.	%
Supervisor															
	NO.		10										10	10	.36%
	%		100%												
Clerical															
	NO.		25	5	5							5	30	35	1.27%
	%		83%	100%	16.6%							14%	86%		
Skilled															
	NO.	190	497	38	47	12	6		11	2	20	242	581	823	29.8%
	%	79%	86%	15.7%	8.1%	4.95%	1.03%		1.89%	.83%	3.44%	29.4%	70.5		
Unskilled															
	NO.	663	1163	4	11		10		39	3	1	670	1124	1894	68.6%
	%	99%	95%	.597%	.898%		.82%		3.19%	.45%	.08%	35%	65%		
Totals															
	NO.	853	1695	47	63	12	16		50	5	21	917	1845	2762	100%
	%	93%	92%	5.12%	3.41%	1.31%	.867%		2.71%	.55%	1.14%	33%	67%		
Grand Total															
	NO.	2548		110		28		50		26		2762			
	%	92%		3.98%		1.01%		1.81%		.94%		100%			

TABLE III-2: FIRMS SURVEYED BY SIZE AND LOCATION

FIRM SIZE	FALL RIVER		FREETOWN		SOMERSET		SWANSEA		WESTPORT		TOTALS	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
Over 1,000	1	100%									1	.40%
500 - 999	3	100%									3	1.21%
250 - 499	14	93%					1	7%			15	6.05%
100 - 249	34	89%	1	2.6%			2	5.3%	1	2.6%	38	15.3%
50 - 99	35	87.5%	1	2.5%	3	7.5%	1	2.5%			40	16.12%
20 - 49	47	81%	3	5.17%	3	5.17%	3	5.17%	2	3.45%	58	23.39%
Under 20	51	79.7%	7	10.9%	3	4.68%	2	3.12%	1	1.56%	64	25.81%
Refused to Participate	25	86%	1	3.4%	2	6.89%			1	3.4%	29	11.69%
Totals	210	84.7%	13	5.2%	11	4.4%	9	3.6%	5	2.01%	248	100%

TABLE III-3: DATA ARRANGED BY OCCUPATION, NEW (N), AND REPLACEMENT (R) DEMAND

DOT CODE	OCCUPATION	FALL RIVER		TOTAL	% OF TOTAL OCCUPATION
		N	R		
160.167	Accountant		1	1	.12%
780.684	Assemblers	9	80	89	10.57% *
361.687	Assorters		30	30	3.56%
807.381	Body Shop Repairer		1	1	.12%
754.684	Casters		5	5	.59%
209.562	Clerical		39	39	4.63%
290.477	Clerks	4		4	.48%
781.687	Cloth Handlers		4	4	.48%
007.167	Computer Programmer		3	3	.36%
769.687	Custom Woodworker		10	10	1.19%
690.485	Cutters		30	30	3.56%
913.367	Dispatcher	1		1	.12%
182.267	Erectors		1	1	.12%
929.687	Floor Managers		3	3	.36%
238.362	Front Desk Clerk	12		12	1.43%
501.685	Galvanizer		31	31	3.68%
189.117	General Manager		3	3	.36%
321.137	Housekeeper	12		12	1.43%
318.687	Kitchen Help		13	13	1.54%
685.665	Knitter		3	3	.36%
869.664	Laborers		5	5	.59%
079.374	L.P.N.		1	1	.12%
600.280	Machinist	9	15	24	2.85%
899.381	Maintenance	12	13	25	2.97%
620.684	Mechanic	2	6	8	.95%
518.361	Molders		5	5	.59%
355.674	Nurse's Aide		13	13	1.54%
144.061	Painter		1	1	.12%
215.482	Payroll		5	5	.59%

Table III-3: Continued

DOT CODE	OCCUPATION	FALL RIVER		TOTAL	% OF TOTAL OCCUPATION
		N	R		
862.381	Plumbing		5	5	.59%
690.682	Power Press		31	31	3.68%
583.685	Pressers		36	36	4.28%
616.685	Riveter		31	31	3.68%
250.257 273.353	Sales - Insurance Sales - Automobile	1	27	28	3.33%
581.685	Sanding		2	2	.24%
787.682	Sewing Machine Operators	25	105	130	15.44%
819.684	Spot Welder		31	31	3.68%
741.687	Spray Painter	9	16	25	2.97%
781.687	Spreader		2	2	.24%
556.130	Supervisor		3	3	.36%
211.362	Teller	1	32	33	3.92%
222.387	Trans., Shipper/ Receiver	2	16	18	2.14%
781.687	Trimmers		30	30	3.56%
311.477	Waitress/Waiters		50	50	5.94% *
819.281	Welders		5	5	.59%
	TOTAL	99	743	842	100%
	*Occupations over 5% of Total				

TABLE III-4: FIRMS REPORTING MOST SUCCESSFUL RECRUITING DEVICES

DESCRIPTION		FALL RIVER	FREE-TOWN	SOM.	SWANSEA	WEST-PORT	TOTAL	FIRM SIZE Over 1000	500-999	250-499	249-100	50-99	20-49	Under 20	TOTAL
WORD OF MOUTH	NO.	82	8	3	5	2	100		1	9	23	14	28	25	100
	%	19.8	53.4	21.5	25.0	22.3	21.1		33.4	24.4	20.0	18.2	20.9	23.8	21.1
WANT ADS	NO.	112	1	3	2	2	120	1	2	10	24	20	34	29	120
	%	27.0	6.7	21.5	10.0	22.3	25.4	33.4	66.7	27.1	20.9	26.0	25.4	27.7	25.4
D.E.S.	NO.	60	2	2	2	1	67	1		6	20	10	16	14	67
	%	14.5	13.4	14.3	10.0	11.2	14.2	33.4		16.3	17.4	13.0	12.0	13.4	14.2
SCHOOLS	NO.	28	1	1	2	2	34			1	9	6	14	4	34
	%	6.8	6.7	7.2	10.0	22.3	7.2			2.7	7.9	7.8	10.5	3.8	7.2
PRIVATE AGENCIES	NO.	15		1	1	1	18				7	2	3	6	18
	%	3.6		7.2	5.0	11.2	3.8				6.1	2.6	2.3	5.8	3.8
OTHER:															
WALK INS	NO.	108	2	4	8	1	123	1		11	29	23	33	26	123
	%	26.0	13.4	28.6	40.0	11.2	26.0	33.4		29.8	25.3	29.9	24.7	24.8	26.0
UNIONS	NO.	5					5				2	1	2		5
	%	1.2					1.1				1.8	1.3	1.5		1.1
FILES	NO.	6	1				7				1	1	4	1	7
	%	1.5	6.7				1.5				.9	1.3	3.0	1.0	1.5
TOTAL		416	15	14	20	9	474	3	3	37	115	77	134	105	474
% OF TOTAL		87.8	3.2	3.0	4.3	1.9	100	.7	.7	7.8	24.3	16.3	28.3	22.2	100

FALL RIVER LABOR MARKET SURVEY

Question #11: Explain the difference in the employment level.

FIRM SIZE	INCREASE		DECREASE		SAME	
	NO.	%	NO.	%	NO.	%
Under 20	16	30.1%	11	28.0%	40	32%
20 - 49	14	26.4%	8	21.0%	32	25.6%
50 - 99	8	15.0%	3	7.8%	26	20.8%
100 - 249	9	16.9%	11	28.9%	20	16%
250 - 499	5	9.4%	5	10.5%	6	4.8%
500 - 999	--		1	2.6%	1	.8%
Over 1000	1	1.8%	--		--	
TOTAL	53	100%	38	100%	125	100%

Question 12: Do you plan to hire any new employees during the upcoming twelve months? Yes_______ No _______

FIRM SIZE	YES		NO	
	NO.	%	NO.	%
Under 20	30	26.3%	37	37%
20 - 49	27	23.6%	30	30%
50 - 99	25	21.9%	13	13%
100 - 249	20	17.5%	15	15%
250 - 449	9	7.8%	3	3%
500 - 999	2	1.7%	1	1%
Over 1000	1	.8%	--	
TOTAL	114	100%	99	100%

FALL RIVER LABOR MARKET STUDY

Question #14: Does your company have plans for plant expansion?

Yes ______ No ______

FIRM SIZE	YES	
	NO.	%
Under 20	8	25.8%
20 - 49	10	32.2%
50 - 99	3	9.6%
100 - 249	8	25.8%
250 - 499	1	3.2%
500 - 999	1	3.2%
Over 1000	-	
TOTAL	31	100%

Question #17: How are employees recruited for available job openings?

	TOTAL # OF FIRMS
A. WANT ADS	117
B. PRIVATE EMPLOYMENT AGENCY	16
C. STATE EMPLOYMENT SERVICE	65
D. SCHOOLS	33
E. WORD OF MOUTH	97
F. WALK INS	122
G. OTHER	9

Unions	6
CETA	2
Radio	1

Question #18: How are vacancies in non-entry level positions filled?

CATEGORY	TOTAL # OF FIRMS
A. IN-HOUSE PROMOTION	145
B. STAFF RETRAINING	11
C. OUTSIDE SOURCES	57

Question #19: What qualities do you seek in a job applicant as being related to successful job performance?

Motivated	1
Good Work Habits	47
Ability to Work (Skills)	36
Experience	39
Reliability (Dependable)	42
Appearance	27
Intelligence	17
Efficient	1
Attitude	8
Honesty	16
Willingness to Work	29
Aggressive	2
Initiative	5
Education	8
Personality	10
Reference	1
Maturity	1
Attendance	9
Stable Employment Record	8
Articulate	1
Loyalty	1

FALL RIVER LABOR MARKET SURVEY

Question #20: Does your company employ persons between the ages of 16 - 21?

Yes 171 No 41

Question #21: Does your company list specific job vacancies with the State Employment Service Job Bank:

Always 45 Sometimes 89 Never 82

Question #22: Has your company ever participated in a federally-funded training program?

Yes 65 No 159

Question #23: Would your company be willing to participate in a CETA-funded training program?

Yes 76 No 108

Question $24: Would your company be willing to develop a training curriculum for specific occupations?

Yes 38 No 142

Question #25: Would your company be willing to hire CETA participants who were trained in a course which was designed and operated by your company on a cost reimbursement basis?

Yes 40 No 140

CETA Employer Surveys

Focus on the Needs and Expectations of Local Business

Prepared by:

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Prepared for:

Private Sector Employment Needs and CETA Program Planning Conference

April 10, 1980

Introduction

In their efforts to learn more about the labor markets in which they operate, many prime sponsors seem inclined to conduct employer surveys. These surveys typically ask an employer about occupations, skill levels, and job openings in the firm. The potential of receiving this type of information is attractive because a prime sponsor could better plan which occupations to train in and could target its job development efforts to firms which indicate likely openings.

Whether used as a planning tool or as a guide to job developers, employer-based surveys have serious limitations. First, such surveys to some extent duplicate the efforts of Employment Security research departments. Prime sponsors can and should use available ES data to determine occupational demand, in particular. Second, the necessity of using somewhat crude survey techniques and instruments tends to diminish the accuracy of the data compiled. Third, employers may be less than candid if the survey results will be used to direct job developers toward openings. Even in surveys where confidentiality of replies is guaranteed, some employers don't answer honestly.

For all these reasons, the Penobscot Consortium will not undertake an employer demand survey. However, a properly designed employer survey can be very helpful in assessing the needs and expectations of the private sector and in determining what strategies will enable CETA to improve its penetration of the private sector. The Consortium will soon undertake an employer survey which has immediate operational value in promoting this objective.

Development of the Survey

In December, 1979, the Consortium's Private Industry Council decided that a survey of employer attitudes towards CETA would be a valuable tool in its efforts to promote private sector utilization of CETA programs. The PIC voted to allot $4,000 to pay for this "attitudinal survey", as it was called.

The Consortium's Department of Planning, Evaluation, and Research persuaded the CETA executive director and the PIC that the proposed survey should become more specifically focused. Incorporating the topics of inquiry suggested by the PIC and the CETA executive director, the planning staff prepared a draft questionnaire which would:

- reveal business perceptions of CETA
- ask previous and present users of our programs about the good and bad points of CETA programs
- ask employers about their hiring standards and practices
- ask employers about their contact (if any) with CETA staff such as job developers
- ask a few general questions about employers' hiring plans for the next year.

The Consortium will utilize a survey firm to refine the survey instrument and conduct the interviews. The Department of Planning, Evaluation, and Research will work closely with the survey firm to design the sample and closely monitor the project.

Use of the Survey Information

The survey results should provide information on business recognition of, attitudes toward, and experience with CETA. The results should indicate how well the Consortium has gotten its message across, the most effective media to use, and should give us a better idea of what image we have and what resistance we must overcome. The survey information will influence the content and media of future promotional efforts by the PIC, and will affect the oversight guidance the PIC supplies to the Consortium.

The Consortium staff will make extensive use of the information turned up by the survey. We need to know more about what businesses look for in job applicants -- what skills, experience, and education do they need to be hired? What are the hiring practices of firms in our three-county area?

We need to learn how to mesh CETA with private sector needs. Are our programs useful to business? What are their good and bad points, as seen by past and present users? Why haven't certain businesses used our programs? How many firms have been contacted by one of our job developers? What effect did this contact have on the firm's utilization of our programs?

Much information generated by the survey will have an immediate operational value, because it will either affirm or change the operating style and program substance of the Consortium's private sector efforts.

Summary

Employer-based demand surveys done by CETA prime sponsors generally would duplicate information available from existing sources be subject to substantial error, and lack cost - effectiveness. However, employer surveys focused on perceptions of and experience with CETA programs, for instance, can provide information not otherwise available and lead to improved performance.

The New Hampshire Balance of State Employer Survey

Prepared by:

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April 10, 1980

The New Hampshire Balance of State Employer Survey

In the winter of 1980 the Private Industry Council of the New Hampshire Balance of State CETA Program contracted with the Small Business Development Program at the University of New Hampshire to conduct a survey of private sector employers. The project was designed to develop in-depth information concerning the operation of private sector labor markets in the nine county Balance of State prime sponsorship. The information provided should enhance CETA's ability to place clients in private, unsubsidized jobs through classroom or on-the-job training. The study is limited to the small business sector - those businesses employing 500 or fewer people. It is scheduled for completion by early summer 1980.

Objectives

The primary objective of the project is to identify those jobs for which CETA sponsored training is appropriate. This will require an evaluation of current and projected labor demand by occupation, and a comparison of this information with the current and projected availability of workers with the requisite skills.

A second important objective is to assess how the CETA program is perceived by small business employers. This information should help identify potential problem areas, and suggest methods of improving the working relationship between CETA and employers. The interviews will be structured in such a way, and the interviewers trained so that the process will be a positive educational experience for employers. The project will give employers more accurate information about CETA resources which should improve their understanding and increase their acceptance of the program.

A third objective of the study is to evaluate the interplay among the small business employer, CETA, and related government agencies such as the Department of Employment Security, Vocational Education, and Vocational Technical Colleges. This will involve both determining how CETA is viewed by other government agencies, and identifying areas of overlap. Avenues to improve coordination of the delivery of related services will be identified and specific steps suggested.

The work effort has been divided into two parts: an analysis of data collected through a series of interviews with small business employers, chambers of commerce, and various government agencies; and a statistical analysis of labor markets in the seven county region. This paper reports only on the employer interview portion of the project.

Interviews

The research has proceeded as follows. First, members of the professional staff talked with representatives of New Hampshire State Agencies about the research plan to get feedback and input. The agencies contacted included CETA, DES, and Vocational Education. Next, the professional staff developed questionnaires - two for employers (a long form for in-person interviews and a short form for telephone interviews), and one for each government agency. Project assistants were then trained about how to administer the questionnaires.

After the preliminaries were completed, the professional staff and project assistants conducted interviews with CETA sub-grantees, Voc-Tech schools, and DES offices in each of the nine counties. Project assistants then administered interviews with small business employers. In-person interviews were conducted with approximately 10% of the employers in each county. Telephone interviews are now being conducted for a much broader sample - an additional 25% of the employers. The sampling procedure employed has been selective rather than random to assure that small businesses from a broad cross section of industries and variable firm size are interviewed. Those employers unlikely to be able to offer skilled full time, year round employment have been underrepresented or omitted entirely.

The employer interviews consist of three sets of questions - labor market search, internal labor markets, and relations with government agencies. The labor market search questions concern the geographic scope of hiring activity, recruiting techniques, screening procedures, entry requirements, (skills, etc.), and training provided. These questions are designed to help identify the types of employers likely to have openings which might be appropriate for CETA participants, and the skills required for these positions.

The questions on internal labor markets concern what happens to employees once hired. Topics covered include job ladders, career opportunities, chances for advancement, turnover, and longevity. These questions should help to identify the types of employers who are able to offer long term employment in desirable jobs.

The questions regarding government agencies are of two types, factual and judgmental. The factual questions concern the type and extent of contact with the various government agencies (number of referrals, hires, etc.). For those employers with prior contact, the judgmental questions concern recommendations for improvements in the relations between employers and agencies (especially CETA). For those employers with no prior contact, the judgmental questions concern impressions of CETA and the potential for future working relations.

CETA state and sub-grantee offices were asked the same basic questions in order to identify gaps and inconsistencies between employer practices and attitudes and CETA perceptions. CETA and other government agencies were also asked about their working arrangements with each other. Finally, toward the end of the project, regional planning and economic development agencies will be asked to make projections concerning employment growth by occupation and to assess the potential for new employers moving into the area.

Preliminary Results

Although it is too early to make any definitive judgements, a review of our results to date leads us to the following tentative observations.

1) There is substantial diversity across the state regarding private sector employment opportunities and the appropriate course of action for private sector initiative programs.

2) Although we have encountered some antagonism to CETA, it has not been as widespread as subgrantees had led us to expect. Nearly one-half of the employers we have contacted to date have expressed an interest in learning more about CETA, particularly the on-the-job training program. This suggests that better outreach may result in more placements.

3) There are no detectable trends yet in terms of industry or size of firm concerning potential for placement. There seems to be

a rather broad range of possibilities. Most OJT placements in New Hampshire have been with a rather narrow group of very small firms. Our results suggest that this practice should be reviewed and probably altered. Larger firms hold the promise of more placements per contact and greater opportunities for advancement.

4) There seems to be a need for improved relations among the various government agencies we have contacted, both at the local and state levels.

5) The recession is being felt by both employers and subgrantees. We will assess the potential impact of the recession on New Hampshire labor markets in our final report.

Conducting Employer Surveys

Prepared by:

Jeremy Ingpen
New England Board of Higher
  Education
April 10, 1980

Andy Sum and Paul Harrington have asked me to talk about my experience in doing employer surveys. To give you some background, I spent two years on the road for the Vermont Department of Employment Security, visiting employers, gathering labor market information--data on wages, job shortages, skill requirements, plant expansions, new shopping centers, job training programs and so on. Subsequently I spent two years running labor market information programs from Montpelier. One of the things that we did during that period was to try to tie together our field information gathering capability with the analytical capability that we had in our central office staff of statisticians and economists. In our field program we had a unique capability: four people - enough to cover the whole state systematically - who were trained in analytical techniques and who were experienced in visiting employers to obtain information. This gave us the first prerequisite for conducting effective employer surveys - a trained staff.

What did we do with these trained people? Over the course of two years we conducted three major survey efforts by direct contact (in person, by telephone) with employers. The first of these was a wage and fringe benefit survey, which I want to talk about a bit, even though it is not as directly related to the type of survey that you need to do for Title VII as the others.

The wage survey started as an informal effort to fill a major data gap -- the lack of systematic wage data on wages in manufacturing occupations. As we gathered more information, we decided to expand the content of the survey to include additional information -- but we decided not to revisit employers who had already been surveyed.

> Strike #1: When we compiled our survey data, we did
> not have comparable information.

We surveyed all manufacturing employers with 50 or more employees. We asked these employers to list the wage levels for their 10 principal hourly job categories. This they did willingly in most cases. However, they used their own job titles. When we came to compile this data, we found we had a horrendous task reconciling these job titles and deciding what job was equivalent to what other job.

> Strike #2: Out of 240 job titles for which we collected information, we were able to publish data for 80, after extensive handwringing over the deficiencies of the data.

Otherwise, this wage survey went smoothly, and the only problems were a few questions which proved to be ambiguous. For example, to the question of the level of fringe benefits provided, some employers replied *yes*, some replied 30% - the answers could not be tabulated. Employers were eager to get the results of the survey, as this was information they otherwise could not obtain. Processing of the survey was slow, due largely to the unplanned way in which it had grown. However, once it was published, in August 1979, we distributed, on a request basis only, 750 copies in 3 months, and a further 750 copies in the next 6 months. By Vermont Department of Employment Security standards, this was a best seller.

Success or not, this Wage Survey exemplifies how *NOT* to conduct an employer survey. It broke all the rules of an elementary course in survey research and design.

The next survey incorporated some of the wisdom we acquired from this experience and from a visit to Ray Fongemie's Shop in Maine. It was a survey closely related to the interests of CETA training - namely an attempt to pinpoint job growth in training needs in the expanding Vermont metal working industry. We called it a *Machine Trades Survey*.

How did we proceed? First, we selected, from the ES 202 files, all Machine Trades Employers by SIC, adding a few employers which for one reason or another fell into oddball categories.

Second, we established a list of the occupations in these industries. To do this, we consulted the 1970 Census and OES Surveys from other states, since at this time Vermont did not have its own OES Survey. The OES Survey is a statistical resource that is invaluable in this situation, as it gives you accurate, up-to-date occupational breakdowns by industry. To establish our list, we used OES data from Maine, Massachusetts, New Hampshire and the Midwest. This gave us a list of the ten priority occupations which we wished to survey in the machine trades' industries. Parenthetically, if you do not find the information you need in published form, call the OES staff - they may have unpublished information.

Thirdly, we designed the survey form to be unambiguous and easy to process. We asked employers to state the increases they anticipated in each category in 1, 2, and 5 years. We asked for a numerical estimate - as some of you may have found out, it is impossible to tabulate a string of MORE or LESS answers.

Fourthly, we surveyed the employers over a 3 week period using our field staff. Finally we published the results.

What was the outcome of all this? At last, we had firm information about the real needs of machine trade's employers, occupation specific, that could be used for the development of training programs.

Political momentum was gathering for government to make a concerted intervention into what appeared to be an acute shortage of skilled labor in machine trades. The outcomes of this was the formation, by the Governor of Vermont Precision Skills Institute, somewhat analogous to the Massachusetts High Technology Council. In fact, the overall situation was analogous to the current Bay State project in Massachusetts, except that in Massachusetts the focus is electronics.

As a result, we found ourselves conducting a follow-up survey to the Machine Trades Survey, that we entitled the Precision Skills Survey. This was limited to 4 areas of the state to a predetermined list of occupations, based on our previous survey and OES. In a few cases we found that employers wanted to add occupations - such as screw-machine operators, and swiss-lathe operators. There was an "Other" category for such requests.

This survey went into considerable detail. For each occupation we asked for employment, 1, 2, and 3 year projected employment, and how many retirements or quits were anticipated, and how many of the jobs becoming available would be filled by upgrading. This meant that for each year, for each occupation, there were three columns:

EMPLOYMENT QUITS UPGRADES

In addition, for each job we asked about the skill requirements using a detailed set of categories that had been developed in conjunction with the state Departments of Vocational Education and Economic Development.

This made for a complicated survey form, as you can see, but with some pro-testing and troubleshooting, it worked quite well.* As a result, we were able to determine, for two different growth areas of the state, that one, Bennington, expected to fill almost all of its experienced jobs by upgrading and that therefore training programs should be aimed:

(1) at training entry level employees,

(2) at providing the training needed for upgrading existing employees, in night courses or on-site.

In addition, we could show what courses needed to be offered.

In Burlington, however, few of the projected jobs would be filled by upgrading. In a situation of acute labor shortage, employers were looking to hire fully-skilled machinists, tool and die makers and machine operators. Clearly the training strategy to be adopted here was different. The situation called for accelerated training programs aimed at turning out fully-trained employees for specific jobs. Here, a training model similar to that used by the Alabama

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*See Appendix 1.

Industrial Training and Development Corporation, of providing very accelerated training courses for skilled jobs, would seem to be appropriate. As in Bennington, we were able to list the courses that should be offered in order of priority.

SUMMARY

1) The key rule of survey research is that you need to have agreement on what a certain result will mean before you conduct the survey. In practice this means that you have to do your groundwork, get the understanding of your constituency and your data before you survey. With this kind of preparation, you will find that *implementing* recommendations derived from the survey is much easier.

2) As far as possible, you should build on the resources of existing data bases. Cohabit with your Employment Security research department - they can save you asking for the industry affiliation and products of firms, since they, or Dun & Bradstreet, already have this information. Thus, they can save you from *aggravating* the employer by asking for duplicate information. Remember, employers are barraged and besieged by people gathering survey information. Keep your requests limited to your specific needs and you will help win their cooperation.

3) But how do you win the cooperation of Employment Security? Do they tell you that their information is confidential? Then find out under what terms it may be disclosed. If you have to go to the commissioner, go. Use the system. Get existing data before you start. Use the expertise of others. Try to restrict your efforts to those jobs you feel that no one else can do for you.

Attachment A

State of Vermont 1978
Wage and Fringe Benefit Survey Questionnaire

STATE OF VERMONT

DEPARTMENT OF EMPLOYMENT SECURITY

Wage & Benefit Survey	Date
Establishment	SIC Code:
Address	
Respondent	
# Employed (Total)	
Hourly	
Salaried	
Average Hourly Rate for Establishment	do not include Salaried Employees
Fringe as a % of Av. Hourly Rate	
Minimum Hourly Rate	excluding bonus
Maximum Hourly Rate	and incentives
Shift Differential 2nd	
Shift Differential 3rd	
Latest Wage Increase: Date:	
Latest Wage Increase: Amount:	
BENEFITS	
Sick Leave:	
Holidays (#):	

Vacation Plan - 1 year	10 years
2	15
3	20
4	25

Group Insurance % Paid:

Life Insurance (Amount):

Major Medical (% Paid):

Sickness & Accident Pay (Disability Insurance):

Pension Plan - Employer pays (%)

Employee pays (%)

What entry requirements do you look for:

What career ladders exist inside your establishment:

From what area do you recruit employees?

COMMENTS:

List the 10 most common jobs in your establishment, the number employed in each position listed, and the wage range.

Where possible include representative jobs in the skilled, semi-skilled, unskilled and clerical categories [smaller establishments (less then 25 total employment) need only list 5 most common jobs.]

The job titles listed are for a guide only. Feel free to substitute those more appropriate to your business.

MANUFACTURING

e.g.	# EMPLOYED	HOURLY WAGE RANGE	AVERAGE HOURLY WAGE
Maintenance Mechanic			
Machine Operator			
Utility Person			
NON MANUFACTURING			
e.g.			
Receptionist			
Bookeeper			
Clerk - Typist			
Administrative Assistant			
Key Punch Operator			

Attachment B

Findings of the Metal Machining Survey

CURRENT NEEDS IN METAL MACHINING OCCUPATIONS

Information recently gathered from about 40 employers around the state (nearly half in the Burlington area) indicates that there is a growing need for workers in metal machining occupations. Expansion by several firms and openings of several new firms will guarantee additional employment for workers with metal machining skills. This report includes wage rates, entry requirements, training programs, and current needs and problems encountered by firms in recruiting workers in specific metal machining occupations.

EMPLOYMENT AND WAGES

Twelve metal machining occupations were chosen for the purposes of this report. Of the twelve occupations listed in Table A, two-thirds of the employment was centered in the lathe operator, machinist, drill press operator, and milling machine operator occupations. Twenty of the firms surveyed indicated that they employ machinists, 14 employ lathe operators and the same number employ tool and die makers, and drill press operators are employed by 13 of the firms.

Wage ranges in the specific occupations shown in Table A vary considerably according to skill levels. Several occupations, notably higher skilled tool and die makers and mold makers, receive wages of more than $7.00 per hour. Wage rates of $3.25 to $3.75 per hour were most common for entry level positions.

ENTRY REQUIREMENTS

Table B presents education, experience and training requirements as well as advancement opportunities for the selected metal machining occupations. High school or vocational school education was preferred or required for each occupation listed with special emphasis on the individual's mechanical ability plus a working knowledge of mathematics and physics.

Many firms provide some form of on-the-job training, including formal apprenticeship programs, but a number of firms are looking for skilled workers who already have at least two years of experience.

Advancement is available for those who acquire additional knowledge and skills. Workers can move upward from machine tool operators to machinists to tool or die makers or into machine programming. Advancement opportunities for tool and die makers include supervisory and administrative positions, or tool designers.

TABLE A

Occupation	No. of Firms in Sample Employing Specific Occupation	Wage Range
Boring Machine Operator	5	$3.54 - $6.61
Deburring Machine Operator	*	3.61 - 4.75
Drill Press Operator	12	3.53 - 5.55
Grinding Machine Operator	8	3.37 - 6.00
Hobbing Machine Operator	*	3.61 - 4.75
Lapping Machine Operator	*	2.65 - 3.50
Lathe Operator (includes Turret Lathe Operator)	14	3.37 - 6.28
Machinist	20	3.37 - 6.61
Machinist I		5.32 - 6.61
Machinist II		4.75 - 5.12
Machinist III		3.37 - 4.20
Milling Machine Operator	8	3.37 - 6.00
Mold Maker	*	5.83 - 7.58
Screw Machine Operator	*	3.61 - 6.13
Tool and Die Maker	14	3.61 - 8.10

* Fewer than three firms

TABLE B

ENTRY REQUIREMENTS AND TRAINING NEEDED
METAL MACHINING OCCUPATIONS
STATEWIDE

OCCUPATION	REQUIREMENTS
Machine Tool Operators (includes: lathe, drill press, milling, grinding boring, deburring, hobbing, lapping, screw machine)	Education-no special education needed for semiskilled jobs, but courses in mathematics and blueprint reading are helpful, and mechanical ability is desirable. Training-most workers get on-the-job training. Advancement Opportunities-machinists, tool and die makers, machine programming and maintenance.
Machinist	Education-high school or vocational school including mathematics, physics, or machine shop desirable. Training-some firms provide apprenticeship opportunities or other types of on-the-job training. Experience-a number of firms are looking for trained workers who have at least two years of additional experience. Advancement Opportunities-tool and die or instrument makers, supervisory positions, technical jobs in machine programming or tooling, self-employed machinists.
Tool and Die Makers	Education-high school or trade school education desired, including good working knowledge of mathematics and physics as well as considerable mechanical ability. Training-formal apprenticeship programs are often required, but some machinists and machine operators can become tool and die makers with additional training. Advancement Opportunities-supervisory and administrative positions, tool designers.

CURRENT NEEDS AND SHORTAGES

Several employers indicated current and anticipated needs for skilled workers with metal machining occupations. Among the specific occupations most often mentioned were machinists, tool and die makers, and lathe, turret lathe, drill press, milling machine, grinding machine, and boring machine operators. Although most established firms do not anticipate any significant increase in metal machining employment, replacement demand at these firms in addition to expansion by and openings of several new firms has created a strong demand for metal machining workers. However, it is difficult for employers to project their needs very far in advance, since the machine tool industry is dependent upon economic trends in other industries.

One problem facing employers concerns the educational qualifications of the applicants for entry level training positions. Many high school graduates are found to lack the basic requirements, such as mathematics (algebra, geometry, and trigonometry) and blue print reading skills.

Another problem which relates to the shortage of skilled workers is the movement of workers from one firm to another, which is especially burdensome because of the time involved in training. Reasons for the transfer are often better wages and/or working conditions. Some of the smaller firms lose workers to larger, higher paying firms.

BY AREA: BURLINGTON, RUTLAND, ST. JOHNSBURY, SPRINGFIELD

Most of the demand generated by new firms is occurring in the Burlington area, where the number of jobs in metal machining occupations is expected to escalate considerably over the next three to five years.

Except for recent recalls and some new hiring by a large area firm, there is little demand for metal machining workers in the Rutland area. However, extended layoffs at other firms coupled with area vocational school machine shop graduates have created an available supply of workers.

In the St. Johnsbury area, the demand for metal machining workers is currently stable, but the large number of anticipated retirements in the next five to ten years is expected to generate high replacement demand.

There is a current strong demand for workers in a broad range of machining occupations in the Springfield area, due to backlogs of orders. A shortage of machinists and other skilled workers exists. Retirement may also be a factor in creating substantial replacement demand in the next few years.

SUMMARY

The demand for skilled metal machining workers in Vermont is growing steadily and is expected to continue this trend for at least the next few years. For each of the occupations covered in this report, a high school or vocational school education is preferred or required, with a special emphasis placed on the individual's mechanical ability and working knowledge of mathematics and physics. Increased cooperation between schools and employers is necessary to guarantee that students are properly prepared for entry into training programs in metal machining occupations, and that enough students are being prepared in vocational programs to meet the current and anticipated demand.

Attachment C

Precision Skills Survey Questionnaire

Name of Firm ______________

Address ______________
____

Contact Person ______________

SIC ______________

Total Employed ______________
Currently ______________
Projected to 12/79 ______________
12/80 ______________
12/81 ______________

STATE OF VERMONT PRECISION SKILLS SURVEY

		EMPLOYMENT									EDUC. REQ.		TRAINING REQUIREMENTS			SPECIFIC COURSE REQUIREMENTS									
	Actual March 1979 Empl. By Occupation	Projected to 12/79.			Projected to 12/80			Projected to 12/81			Years of Experience Required	High School Grad. or Equivalent	High School Vocational Ed.	On-the-Job Training	Apprenticeship	Post-Secondary Voc. Ed.	Basic Shop/ Trade Math	Algebra	Geometry	Trigonometry	Applied Physics	Communication/ Comprehension	Machine Shop	Mechanical Drawing	Blueprint Reading	Other
EMPLOYED BY SPECIFIC OCCUPATION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
SKILLED PRODUCTION																										
Tool & Die Maker																										
Machinist																										
Machine Tool Op., Numerical Control																										
Machine Tool Op., Combination																										
Lathe Operator																										
Drill Press Operator																										
Milling/Planing Machine Operator																										
Sheet Metal Worker																										
Welder, Class A																										
Other																										
TECHNICIAN																										
Drafter																										
Tool Programmer, Numerical Control																										
Mechanical Engineering Technician																										
Electrical/Electronics Technician																										
Other																										
REPAIR AND MAINTENANCE																										
Maintenance Mechanic																										
Millwright																										
Other																										

Methodology and Sample Selection for a Survey of Private Sector Firms that Utilize Part-Time Employment

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April 10, 1980

Introduction

The Policy and Evaluation Division of the Massachusetts Department of Manpower Development has been engaged in a comprehensive research project to determine the need for and feasibility of developing a CETA demonstration program that would provide part-time employment opportunities for AFDC female household heads and CETA-eligible older workers. This project consists of four major phases: (1) background research to determine the extent and nature of part-time employment in the United States and Massachusetts and to examine legislative and administrative barriers to developing part-time employment programs for CETA clients; (2) client surveys to determine the demand for part-time employment among AFDC mothers and CETA-eligible older workers and to examine the types of part-time employment opportunities that they desire; (3) employer interviews with a sample of firms in the Boston Metropolitan Area to examine existing part-time employment opportunities which would be suitable to the needs and skills of these two target groups, and (4) final data analysis and policy recommendations regarding the development of a demonstration project that would provide part-time employment opportunities for AFDC single parents and older workers.

The purpose of this paper is to review the methodology utilized in conducting the third phase of the research project, the employer survey. There are three major topics that must be addressed in this examination. The first of these topics is the issue of targetting industries for inclusion in the sample. The second topic focuses upon the methods utilized in contacting private sector employers, and the degree of cooperation received from the firms contacted. The final topic addresses the issue of the type of information obtained from the interviews and the uses and limitations of that data.

Targetting Issues

The employer survey conducted by the Policy and Evaluation Division as part of the research project on part-time employment was limited to industries in which a relatively large share of part-time employment was found to exist. To determine the industries that were to be included in the sample, background research on the industrial and occupational distribution of part-time employment in Massachusetts was conducted. For this purpose, the most recent and comprehensive source of data available was utilized - the 1976 Massachusetts Survey of Income and Education (SIE). The primary purpose of the SIE had been to develop a statistically reliable estimate of the number of children living in poor families in each of the 50 states and to determine the characteristics of these poor families to better allocate HEW funds for serving the educational needs of the economically disadvantaged. The SIE also provided, however, the most detailed source of information on the employment and earnings status of individuals aged 14 and older since the 1970 Decennial Census. From the Massachusetts SIE, the number of part-time workers employed in 2-and-3-digit industries during 1976 was determined. Appendix A at the back of this paper provides a list of the major industrial classifications and selected 3-digit industries in which at least one percent of the total number of part-time workers were found to be employed. This list of industries also provides information on the proportion of all employees in each of the industries that were employed part-time.

The findings from the SIE, however, raised a number of questions about the nature of certain occupations and industries in which part-time workers were found to be concentrated, and thus the sample of chosen industries excluded those predominated by occupations which were considered to be inappropriate for meeting the employment and income needs of CETA participants. For example, dishwashers, waiters and waitresses, and other food service workers are lower paying, secondary labor market occupations that offer few opportunities for advancement. Because they were concentrated in Eating and Drinking Establishments, this industry was excluded from the sample. Similarly, laborers are the predominant part-time occupation found in the construction industry. For this reason, and because construction is a seasonal and cyclically unstable industry, it was excluded from the sample. A number of other industries were also excluded based upon the findings of the SIE and upon speculation about the nature of part-time jobs found in those industries.

To identify a sample of firms within the targetted industries, data from the Division of Employment Security's ES202 series were procured. The ES202 provides a comprehensive list of the names and addresses (by SIC classification and size class) of all firms within the state and within local labor market areas that are covered under the state's unemployment insurance (U.I.) system. Utilizing the Boston labor market area's ES202 print-out, the desired number of firms in each individual category (2- and 3-digit SIC classifications) was randomly selected. An oversampling of 100% was taken to allow for firms that either did not employ part-time workers or did not wish to participate in the survey.

The sample of firms to be interviewed could have included firms that both did and did not employ part-time workers and would therefore have provided two separate types of information. First, in firms that did employ part-time workers, information could have been collected on the type of part-time employment opportunities that existed in these firms, and second, in firms not employing part-time workers, reasons why they did not and possible incentives that may encourage them to do so could have been examined. This methodology, however, was utilized in a landmark study conducted in 1976-77 by Professor Stanley Nollen, et. al., of Georgetown University which examined the employer's perspective of part-time employment. In this study, the authors interviewed 68 private sector firms to obtain information on the costs and benefits of permanent part-time employment and the reasons why some employers use it and others do not.

Rather than duplicate past efforts, the methodology utilized in conducting this employer survey was narrowed to only include firms that employed part-time workers at the time of the survey. This narrower focus permits a more detailed examination of the types of occupations in which part-time employees were found and thereby provides a clearer perspective of the industries and occupations that are most appropriate for inclusion in a CETA demonstration project that would provide part-time employment opportunities for eligible individ[illegible]s.

Methods Used in Contacting Private Sector Employers

To choose a survey sample, a formal letter of introduction was mailed to the director of personnel in each of the firms selected from the ES-202 listing of Boston SMSA employers. This letter informed these individuals about the research project on part-time employment that was being conducted and told them that a staff member from Policy and Evaluation would soon contact them to request their cooperation in this effort. When the phone call was made, the caller determined whether or not the firm currently employed part-time workers. In those firms that did have part-time employees, their cooperation was requested and an interview scheduled. Relatively few firms refused to participate in an interview.

As the project progressed, it became clear that the letter of introduction was an ineffective means to accomplish our objective. First, the letter was addressed only to "Director of Personnel" without a name attached and therefore sometimes had trouble reaching the appropriate person and, even when reaching that person, it received little attention. The person who later telephoned was often told that the letter was never received or that the recipient could only vaguely remember its contents (even though the phone call was always made within two weeks after the letter was mailed). As a result, by the time it came to schedule the latter half of the interviews, the letter was disregarded and the information it had contained was provided in the telephone call (since that information often had to be reiterated anyway).

Scheduling was most often done by the person who was to conduct the interview, and, although this may have required more time, it was found to create less confusion. It also enabled the interviewers to schedule for themselves a number of interviews in the same geographic area which minimized travel time and expenses. Interviews were always conducted in person, regardless of the size of the firm, and were conducted with the Director of Personnel (in firms where this position existed) or with his/her designated representative. In cases where there was not Director of Personnel, the most appropriate person (whoever was in charge of hiring and employment policies) was interviewed. For example, in a small local grocery store, the owner would most likely be the person interviewed. In some cases, interviewers found that they had to speak with a number of different people to have all questions answered. This occurred in small establishments as well as in large corporations. The owner of one small retail establishment answered policy questions, then brought in his "head bookkeeper" (herself a part-time employee) to answer questions about the wages paid to and hours worked by part-time workers. Likewise, at a large metropolitan bank, an interviewer was sent to two different departments for answers to the survey questions. One department manager provided information on numbers employed while the other provided wage information.

Information Received, Uses and Limitations of the Data

As mentioned above, all of the employer survey interviews were conducted in person. This was insisted upon because the open-ended nature of certain questions required more than a simple numerical response. Interviews lasted approximately 20 minutes to nearly an hour, depending upon the responsiveness of the person being interviewed. The median length of an interview was 30 minutes.

A copy of the survey instrument can be found in Appendix B of this paper. The type of information collected from this survey can be divided into two categories. The first section of the questionnaire was designed to collect some general data about the firm (such as its industrial classification, size, and employment policies) and then to focus upon obtaining detailed information about the predominant occupations in which part-time workers were employed. For each firm surveyed, data was collected on the three occupations in which part-time employment was found to be most prevalent. This ultimately provided information on nearly 200 occupations because, although commonality existed among the occupations cited, approximately half of the occupations were found to be prevalent in only one firm among those surveyed.

For each occupation cited by the firms, information was collected in the level of employment (both full and part-time), beginning hourly wages, maximum wages attainable, hiring requirements in terms of education and experience, on-the-job training offered, promotional opportunities that existed, the number of new hires made in the previous year, and the number of job openings that existed at the time of the survey. Information was also collected on differences in the treatment of part-time and full-time workers regarding the above factors. Occupational employment data was collected to determine the absolute and relative degree of utilization of part-time employment within an occupation. Data on beginning hourly wages and maximum attainable wages were obtained to measure the earnings potential of individuals employed part-time in the occupations cited and to measure differences in these earnings across occupations. Information on the minimum educational requirements and the typical educational attainment of employees in the occupations cited was derived to determine how they compared with the education and skills of the populations to be targetted by the CETA demonstration project and the extent to which skills training would be necessary or desirable. The firms were questioned about any on-the-job training and promotional opportunities that existed for part-time employees in these occupations to determine whether these occupations were part of the firms' internal career ladders or whether they were dead-end jobs. Finally, data was collected on the number of new hires made in the previous year (by growth and replacement) to examine the degree of turnover in these occupations, and on the number of job openings existing at the time of the survey which would provide information on the extent to which unsubsidized part-time employment opportunities may exist for a CETA client upon termination.

In sum, the information collected was primarily intended to identify the occupations and industries within the Boston Metropolitan Area that offer the best employment opportunities for CETA clients. The most appropriate occupations on which training programs should focus are those which meet the employment and income needs of the targetted populations (i.e., offer the best wages and fringes, promotional opportunities, etc.) and which represent unmet demands of the local labor market area.

The information provided by this survey can be utilized by both program planners and job developers in planning employment and training programs that meet the above specifications and in focusing upon industries that will provide the most desirable placements.

The sample of firms surveyed for this research effort was restricted geographically to the Boston Metropolitan Area and, as a result, the findings are only directly applicable to CETA prime sponsors and subgrantees lying within this labor market area. The types of part-time (as well as full-time) employment opportunities that predominate other labor market areas of the state may differ substantially, and even the characteristics of the same occupations (e.g. wages, hiring requirements, etc.) may be quite different given the unique demand and supply conditions of each labor market area.

Another limitation on the use of this data is the fact that the sample of firms surveyed was not chosen by random sampling technique. It was, as mentioned above, selected by targetting industries with a high concentration of part-time employment. In light of this fact, the findings of this survey cannot be applied beyond the sample of firms interviewed to the industries (the population) as a whole, nor can the statistical reliability of the findings be determined. Even so, the availability of this data provides a comprehensive source of industrial and occupational data on part-time employment that is a first of its kind and clearly stands as a major factor in determining the feasibility of a demonstration project in part-time employment for the Massachusetts CETA system.

APPENDIX A

Industrial Distribution of Employed Persons (16+) and Those Voluntarily Employed Part-Time for Major Industrial Categories and Selected Industries; Massachusetts: 1976

SIC Code		Total Part-Time Employment	Total Industrial Employment	Part-Time as a Share of Industrial Employment
	Total, All Industries	430,959 (100.0%)	2,557,062	16.9%
01-09	Agriculture, Forestry, and Fisheries	7,601 (1.8%)	33,104	23.0%
15-17	Construction	6,918 (1.6%)	100,958	6.9%
17	Special Trade Contractors	4,687 (1.1%)	48,487	9.7%
24,25 32-39	Manufacturing-Durable Goods	9,723 (2.3%)	415,748	2.3%
20-23	Manufacturing-Nondurable Goods	15,450 (3.6%)	262,740	5.9%
271	Newspaper Publishing and Printing	4,827 (1.1%)	12,876	37.5%
40-49	Transportation, Communication and Other Public Utilities	13,584 (3.2%)	72,693	18.7%
421	Trucking Service	4,946 (1.1%)	23,186	21.3%
50-51	Wholesale Trade	8,579 (2.0%)	98,273	8.7%
52-59	Retail Trade	152,213 (35.3%)	436,753	34.9%
531,532	Department and Mail Order Establishments	21,086 (4.9%)	52,947	39.2%
541	Grocery Stores	27,407 (6.4%)	63,564	43.1%
554	Gasoline Service Stations	6,659 (1.5%)	22,035	30.2%

SIC Code		Total Part-Time Employment	Total Industrial Employment	Part-Time as a Share of Industrial Employment
56	Apparel and Accessory Stores, Exc. Shoes.	8,693 (2.0%)	19,942	43.6%
58	Eating and Drinking Places	49,579 (11.5%)	116,247	42.6%
593-595 599	Miscellaneous Retail Stores	10,769 (2.5%)	24,320	44.3%
60-67	Finance, Insurance, and Real Estate	18,038 (4.2%)	155,778	11.6%
60	Banking	4,828 (1.1%)	51,216	9.4%
63	Insurance	4,784 (1.1%)	69,057	6.9%
65-66	Real Estate	6,281 (1.5%)	21,296	29.5%
73,75,76	Business and Repair Services	9,818 (2.3%)	83,846	11.7%
88,70,72	Personal Services	28,837 (6.7%)	78,564	36.7%
881	Private Households	14,273 (3.3%)	26,013	54.9%
723	Beauty Shops	5,420 (1.3%)	14,269	38.0%
78,79	Entertainment and Recreation Services	11,820 (2.7%)	33,296	35.5%
791-794	Miscellaneous Entertainment and Recreation	10,244 (2.4%)	23,321	43.9%
80,81,82 84,86,89	Professional and Related Services	142,332 (33.0%)	574,241	24.8%
801,803	Offices of Physicians	4,719 (1.1%)	14,889	31.7%
806	Hospitals	28,800 (6.7%)	115,291	25.0%

SIC Code		Total Part-Time Employment	Total Industrial Employment	Part-Time as a Share of Industrial Employment
8092	Convalescent Institutions	17,755 (4.1%)	35,978	49.3%
807 part 8099	Health Services, N.E.C.	5,904 (1.4%)	26,190	22.5%
821	Elementary and Secondary Schools	34,771 (8.1%)	163,287	21.3%
822	Colleges and Universities	16,632 (3.9%)	74,829	22.2%
824,829	Educational Services, N.E.C.	4,386 (1.1%)	9,254	47.4%
866	Religious Organizations	5,134 (1.2%)	18,299	28.1%
892,899	Miscellaneous Professional and Related Services	6,407 (1.5%)	16,936	37.8%

APPENDIX B

QUESTIONNAIRE FOR EMPLOYERS OF PART-TIME WORKERS

The following questionnaire is divided into two sections. The first section pertains to specific information about occupations in which persons are currently employed part-time. The second section pertains to more general information about part-time employment within the firm including the general perceptions of employers about some of the benefits/costs of part-time employment.

Section One

1. Name of firm ____________________

2. Address ____________________
____

3. SIC classification ____________________

4. Person interviewed ____________________
Name
____
Title
____
Phone Number

5. Total Employement in Establishment

	1978	1979 (Current)
a. Total	____	____
b. Full-Time	____	____
c. Part-Time	____	____

6. How do you define part-time employment?
____

7. Does your firm have an explicitly stated policy on the employment of personnel on a permanent, part-time basis?

____yes ____no

If yes, what is this policy? ____________________
____
____

8. Would you be willing to hire two part-time workers to fill one part-time position? ____yes ____no

9. In what occupations do you employ persons part-time? (list as many as are known)

____

____

10. In which of these occupations is part-time employment most prevalent? (list top three only)

a. ____________________ number employed, total __________
number employed, part-time ______

b. ____________________ number employed, total __________
number employed, part-time ______

c. ____________________ number employed, total __________
number employed, part-time ______

11. What are the beginning hourly wages (with no experience) in each of these occupations?

a. ________________ $ ________________
b. ________________ $ ________________
c. ________________ $ ________________

(If comparable full-time weekly wages or monthly wages are given - get the number of hours in a full-time week).

12. Do beginning wages differ for full-time and part-time workers in these occupations?

____

13. What is the maximum hourly wage that a person could earn in each of these occupations?

a. ____________________ c. ____________________
b. ____________________

14. Number of new hires in last year in each of these occupations.

a. total new hires __________; new hires due to growth ________;
new hires due to replacement ______________

b. total new hires __________; new hires due to growth ________;
new hires due to replacement ______________

c. total new hires __________; new hires due to growth ________;
new hires due to replacement ______________

15. Hiring requirements for specific occupations.

(i) minimum educational attainment required.

a. ________________________________
b. ________________________________
c. ________________________________

(ii) typical educational attainment of new hires

a. ________________________________
b. ________________________________
c. ________________________________

(iii) previous experience required?

a. ____yes ____no
b. ____yes ____no
c. ____yes ____no

(iv) amount of previous experience

a. ________________________________
b. ________________________________
c. ________________________________

(v) do these requirements differ for full or part-time workers?

____
____
____

16. Can current employees in these occupations who are employed part-time get promoted internally to other occupations.

(Note: This does not include a typist being promoted to senior typist, but only promotions into new occupations.)

a. ____yes ____no
b. ____yes ____no
c. ____yes ____no

Is it necessary for part-time workers to become full-time employees in order to be promoted? ____yes ____no

Proportion of part-time workers in the occupation who typically get promoted

a. ________________________
b. ________________________
c. ________________________

Types of occupations in firm into which a person could be promoted.

a. ____

____

b. ____

____

c. ____

____

17. Do you offer any on-the-job training to employees in these occupations?

	Part-time		Full-time	
a.	____yes	____no	____yes	____no
b.	____yes	____no	____yes	____no
c.	____yes	____no	____yes	____no

If yes, describe the nature and average length of this training.

a. ____

b. ____

c. ____

18. Can part-time employees in these and other occupations take advantage of school tuition assistance plans?

____

____

____

19. For each of the specific occupations, how many job openings are currently available?

	Occupation		
a.	______________	______________total openings	__________part-time
b.	______________	______________total openings	__________part-time
c.	______________	______________total openings	__________part-time

20. On average, for each of these occupations, how many hours/week do part-time employees work?

a. ____________________hours
b. ____________________hours
c. ____________________hours

How many hours comprise a full-time week in this firm?

______________hours

General Questions about Part-Time Employment

1. It has been previously stated that there are certain benefits and costs to employers who use part-time workers. In your opinion, what (if any) are the benefits of employing part-time workers?

____

____

____

What are the costs or negative aspects associated with a part-time work force?

____

____

____

2. Based upon your experience with part-time employees, please rate them as better, equal or worse than full-time workers with respect to the following characteristics or activities.

	Better	Equal	Worse	No Opinion
a. productivity				
b. absenteeism				
c. turnover				
d. committment				
e. Job satisfaction				

3. Do the following costs differ for part-time and full-time workers, if so, how?

personnel and
administrative costs____

____

labor costs____

____

benefit costs____

____

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a. productivity				
b. absenteeism				
c. turnover				
d. committtment				
e. Job satisfaction				

3. Do the following costs differ for part-time and full-time workers, if so, how?

personnel and
administrative costs ______________________________

____

labor costs ______________________________________

____

benefit costs ____________________________________

____

(d) Newspaper Ads

(e) D.E.S.

(f) Private employment agencies

(g) Other

Do these methods differ from those used to fill full-time openings? If so, what are the differences? ____________________

____

9. Do you plan to expand the part-time work force in this firm?

____yes ____no

If yes, in what occupations and why? ____________________

____

10. Experience with CETA/WIN

a. Are you familiar with the CETA and/or WIN program in this state?

b. Have you ever been contacted by a local CETA administration?

c. Have you ever hired a person from a CETA training program?

____yes ____no

d. If yes, for what occupations ____________________

____

Are these persons still employed? ____________________

____

Employer Survey

Thirteen High Net Demand Occupations

Prepared by:

Gregory Phillips
Worcester Employment and Training
Consortium
April 10, 1980

PURPOSE AND OBJECTIVES

The purpose and objectives of the Employers Survey can be characterized as being multi-fold. The interests are as follows:

- To assist the Worcester Prime Sponsor and other concerned agencies in focusing on the actual, demonstrated employment needs of the local businesses and industries;
- To gather information relating to those job opportunities requiring skills and knowledge which can be acquired at community colleges, vocational schools, CETA training operations and/or other manpower concerns;
- To increase the private sector's participation in local employment and training programs;
- To provide information to CETA and educational institutions so they can better direct job seekers needing entry level positions and career guidance.

METHODS USED TO CONDUCT EMPLOYER SURVEY

The following narrative is designed to provide an overview of the techniques which were utilized in conducting the field interviewing phase of the Employer Survey in the Local Labor Market Area regarding occupations which are considered high demand occupations and/or shortage occupations. Personal interviews were conducted with firms in the Worcester Labor Market Area (LMA) which employed workers in 13 of the 20 high net demand occupations. The purpose of these interviews was to obtain information with regard to hiring standards, wages, promotional opportunities, training practices, and sources of labor supply/recruitment for each of the 13 occupations included in the survey. For these 13 occupations, a mean of 16 interviews were to be conducted with employers in those industries within the Worcester LMA that dominated employment in these occupations. Table 1 contains a list of the 13 occupations for which interviews were conducted.

DESIGN AND STRUCTURE OF THE INTERVIEW QUESTIONNAIRE

A complete copy of the questionnaire which was used in conducting the employer-based survey is contained in Appendix A to this report. This questionnaire was designed to obtain specific information on selected aspects of employers' hiring standards (e.g. formal education, training and experience requirements) sources of labor supply, recruitment methods, and training practices. Additionally, promotional opportunities for employees in the 13 high net demand occupations were also ascertained.

The introductory questions on the interview questionnaire form were designed to gain some general information (i.e. firm name, firm address, standard industrial classification, and the name of person who was to be interviewed). For the most part, this information was compiled and entered onto the questionnaire prior to the interview by the interviewer.

Question number 1a thru 2 were designed to obtain information regarding the total number of employees within the establishment (both full and part-time), the level of employment in specific occupations, and a two-year projection of the firm's labor needs.

Question number 3 was designed to compare separation data to growth data so as to measure turn-over rates. It should be noted that a high percentage of firms were unable to given specific data relating to growth/separation; however, they (persons being interviewed) were able to give actual data regarding turnover rates, which sufficed.

In question 4, employers were asked to reveal the entry and maximum hourly wages paid to employees in the 13 high net demand occupations. The beginning wage question was asked so as to get an interfirm and interindustry comparison of wages for persons with only entry-level skills and/or with little or prior work experience in the occupation.

Question 5 was designed to obtain data on the hiring requirements for the occupations being surveyed (i.e. educational attainment, previous experience and whether high test scores are required to enter into the occupation). In the case of educational attainment, each firm was asked to reveal the level of education (in years) required for performance in the occupation. Not all the information was quantifiable; some areas included specialized test scores, license requirements, and in some cases personal character traits.

Several major issues were addressed in question number 6 pertaining to the sources of labor supply for each occupation and/or the employer's recruitment methods when job opportunities become evident. The various categories of potential labor supply sources were clearly defined in order to ascertain the types of educational and/or training sources utilized by these firms. In conjunction with question number 6, number 7 was designed to realize the type of training (e.g. OJT, Classroom etc.) being provided by employers; the training time, and the number of employees being trained in the occupations being surveyed.

Question number 8 dealt with the existence of internal career ladders offering promotional opportunities and to cite the types of occupations into which they were typically promoted. While the sample size was too small to rigorously test the hypothesis with respect to general and/or specific training practices and promotional opportunities among firms, it was generally felt that the answers would lend some general insights into the training practices and promotional opportunities of various types of firms.

The remaining questions (9,10,11,12) dealt with the length of time it usually takes to fill a job opportunity, once the opportunity presents itself (specifically, the number of weeks it takes to fill an opening). In addition questions were asked related to the residency of the persons in these high net demand occupations. Primarily, the intent of this question was to get an idea of where employers hire their employees. In other words, do most employees come from the local labor market area or did the majority live elsewhere (e.g. Worc., other areas of MA, outside of MA?)

The final question included in the interview format was open-ended in nature. This question dealt with the willingness of employers to cooperate and/or work in conjunction with the Worcester Manpower Consortium to develop training programs tailored to fit their labor needs, both present and future. The intent of this question was to generate an overall picture of how employers regarded CETA employment & training functions and to solicit suggestions and/or modifications, so manpower services can better meet their needs with a qualified labor force.

INTERVIEWING METHODS

Due to the length of the questionnaire and the nature of the data being collected, personal interviews as opposed to telephone interviews were conducted. In addition, the questionnaire was not always self-explanatory, and, therefore, precluded conducting the survey by mail. Firms with whom interviews were to be conducted, however, did receive a letter of introduction, explaining the purpose of the survey and outlining the general areas to be covered. A copy of the letter of intent can be found as Appendix B of this report. The letter was mailed directly from the Worcester Manpower Consortium, under the signature of Mr. Fairman C. Cowan, Private Industry Council Chairman.

Initially, a sample size of 71 firms were selected to participate in the employer based survey. Letters were mailed out describing the nature of the survey and its intent. This letter was sent to the attention of the "Personnel Director." However, in many cases, the letter did not reach the person in charge or persons who had the necessary data.

After the initial mailing of 71, an additional mailing of 37 concluded the contact phase of the employer-based survey for the 13 occupations yielding the highest net demand.

After successfully contacting the person or persons who were responsible for hiring workers in the specific occupations, the visitor summarized the specifics to be covered during the personal interview and date and time was arranged. It was felt by the interviewing team that if there was discussion of the specifics to be covered this would expedite the on-site visit.

The overall degree of cooperation by firms was very favorable. Table 2 presents information by occupation on the number of firms contacted and the number of interviews completed.

It should be noted that firms selected to participate in the employer based survey were chosen by employment class-size identified on the basis of the 1970 census of industry/occupation data as dominant employers of workers in selected high net demand occupations within the Worcester Labor Market Area.

Table 1: INVENTORY OF JOB AREAS FOR INTERVIEWS

Machine Trade Occupations (N=4)

- Machinists
- Tool Makers
- Machine Set-Up Persons
- Metal Machine Operatives (Forging & Punching & Extruding)

Clerical Occupations (N=3)

- Bookkeepers
- Secretaries
- Typists

Service Occupations (N=1)

- Licensed Practical Nurses

Craft Occupations (N=2)

- Carpenters
- Heavy Equipment Mechanics

Technical Occupations (N=3)

- Electronic Technicians/
- Lab Technicians (Radiology, etc.)
- Electronic Data Processing Technicians

Table 2: NUMBER OF FIRMS CONTACTED AND THE NUMBER OF INTERVIEWS COMPLETED, FOR THE 13 HIGH NET DEMAND OCCUPATIONS

Machine Trades Occupation

	No. of Interviews	No. of firms Contacted Who Did Not Employ Persons in the Occupation or Did Not Cooperate	Total Firm Contacted
Machinist	23 (82.1%)	5 (17.9%)	28
Tool-Maker	11 (55.0%)	9 (45.0%)	20
Metal Machine Operatives (Metal, Forging, etc.)	6 (60.0%)	4 (40.0%)	10
Machince Set-Up Operator	9 (81.8%)	2 (18.2%)	11
Machine Trades Occupations Total	49 (71.0%)	20 (29.0%)	69
Craft Occupations			
Diesel Mechanics	3 (42.8%)	4 (52.2%)	7
Carpenters	1 (50.0%)	1 (50.0%)	2
Craft Occupations Total	4 (44.4%)	5 (55.6%)	9
Service Occupations			
Licensed Practical Nurses	5 (42.0%)	7 (58.0%)	12
Clerical Occupations			
Secretaries	10 (40.0%)	15 (60.0%)	25
Typists	11 (48.0%)	12 (52.0%)	23
Bookkeepers	3 (23.0%)	10 (77.0%)	13
Clerical Occupations Total	24 (39.0%)	37 (61.0%)	61
Technical Occupations			
Electronic Data Processing	7 (35.0%)	13 (65.0%)	20
Lab. Technicians	5 (42.0%)	7 (58.0%)	12
Electronic Technicians	5 (50.0%)	5 (50.0%)	10
Technical Occupations Total	17 (40.0%)	25 (60.0%)	42
Total of All Occupations	99 (57.0%)	74 (43.0%)	173 Contacts

Table 3: DISTRIBUTION OF FIRMS PARTICIPATING IN SURVEY, BY THE NUMBER OF OCCUPATIONS FOR WHICH AN INTERVIEW TOOK PLACE

Number of Occupations	Number of Firms Participating
One Occupation	39
Two Occupations	39
Three Occupations	8
Four Occupations	13
Total Number of Firms	99 Firms

In the final analysis, a total of 99 interviews were arranged and conducted with firms that employed persons in the 13 high net demand occupations. These interviews were conducted in 64 different firms; 60 firms participated in multiple interviews. It was the intent of the survey team to interview as many occupations available in a given firm in order to save time and conserve energy. The majority of firms participated in two occupations. However, 21 firms participated in 3-4 interviews. The distribution of the number that participated per firm is presented in the above table.

Table 4: DISTRIBUTION OF FIRMS BY EMPLOYMENT CLASS-SIZE

Employment Class-Size	Percent Total	Total Number of Employees in the Establishments
1	20%	50-99
2	32%	100-249
3	20%	250-499
4	10%	500-999
5	18%	1000+
	100%	

As the data in Table 4 indicates, 48% of the interviews were conducted in establishments that employed 250 or more persons, 52% of the interviews were conducted in establishments in the 3-5 employment size class. The over-sample of employment class-size between 1-3 was intentionally due to the nature of the survey. The majority of the interviews were conducted in the machine trades industry (49.4) simply because of the Worcester industry distribution. 4% of the interviews were conducted in the craft occupations. 5% of the interviews were conducted in the service occupations and 24.2% of the interviews were conducted in the clerical occupations. Additionally, 17.1% of the interviews were conducted in the technical occupations.

RESULTS OF THE EMPLOYER BASED SURVEY OF THE 13 HIGH NET DEMAND OCCUPATIONS IN WORCESTER LABOR MARKET AREA

This employer based survey, and national events during and prior to the completion of this program have led us to realize how variable the Worcester SMSA job market can be. A continued shortage of dependable skilled, entry-level workers, specialized mechanics & machinists, and technically trained support personnel continues to exist almost independent of economic conditions.

Educational planning of a long-range is most difficult especially during times of extensive economic fluctuation. However, the following conclusions have been drawn from this employer based study:

1. Skilled persons, such as machinists and technicians, will continue to be in heavy demand unless a severe and/or lengthy recession should occur.
2. Electrical and electronics engineers are again in short supply.
3. Most of the skilled trades (lathe operator, millwright, heavy equipment mechanics, carpenters, etc.) are almost continuously in high demand.
4. Competent and dependable persons, from secretaries through service persons remain difficult to find and retain thereby being in high demand.

EMPLOYMENT TRENDS

Employment trends can be determined by hiring trends and hiring needs. As an aid in establishing these trends the employer based survey concentrated on several major issues:

- Positions employers considered the hardest to fill;
- Length of time it took to fill an opening;
- The overall occupational turnover rate;
- Positions in which persons can be promoted within a given occupation.

Occupations requiring specific skill or training were considered most difficult to fill. Occasionally a skilled position was listed as easy to fill due to the "surplus" number of skilled workers in a particular industry. A position requiring less training was listed as difficult by some employers due to special requirements and due to turnover and difficulty of employee retention (based on specific working conditions e.g. job monotony and low wages).

Educators, placement services (CETA and Sub-Grantees), and Massachusetts Department of Employment Security (DES), along with economic planners need an accurate and more specific input regarding job related business opportunities if the ever-shrinking tax basis is to be utilized more effectively. Such information should lead to better and more flexible educational planning, which would affect the unemployment level on a local basis. Aggregating such data with town and city could also contribute to long range educational planning and retraining programs (i.e. local educational institutions, Voc. Ed., CETA Prime Sponsors, etc.).

At present, there are few problems which directly influence difficulties affecting such concurrence. The availability of cost-effective and immediately responsive data processing information facilities are not established, therefore, preclude the expedition of a smooth contract between local planning offices.

Economic fluctuations suggest that studies of this nature should be performed on a continuing basis. Given adequate data processing tools, such a study will be available on a cost-effective basis and will allow educators and manpower organizations to update labor needs on a daily basis.

INDIVIDUAL CENSUS
OCCUPATIONAL DESCRIPTION

Bookkeeper (Clerical)

General Bookkeeper - Keeps complete set of records of financial transactions of establishment: Verifies and enters details of transactions as they occur or in chronological order in account and cash journals from items, such as sales slips, invoices, check stubs, inventory records and requisitions. Summarizes details on separate ledgers, using adding or calculating machine, and transfers data to general ledger. Balances books and compiles reports to show statistics, such as cash receipts and expenditures, accounts payable and receivable, profit and loss, and other items pertinent to operations of business. Calculates employee wages from plant records or timecards and prepares checks or withdraws cash from bank for payment of wages. May prepare withholding, Social Security, and other tax reports. May compute, type, and mail monthly statements to customers. May complete books to or through trial balance.

Clerk Typist (Clerical)

Compiles data and operates typewriter in performance of routine clerical duties to maintain business records and reports: Types reports, business correspondence, application forms, shipping tickets, and other matter. Files records and reports, posts information to records, sorts and distributes mail, answers telephone, and performs similar duties. May compute amounts using adding or calculating machine.

Secretary (Clerical)

Schedules appointments, gives information to callers, takes dictation, and otherwise relieves officials of clerical work and minor administrative and business detail: Reads and routes incoming mail. Locates and attaches appropriate file to correspondence to be answered by employer.

Machinist (Mach. Shop)

Sets up and operates machine tools, and fits and assembles parts to make or repair metal parts, mechanisms, tools, or machines, applying knowledge of mechanics, shop mathematics, metal properties, and layout and machining procedures: Studies specifications, such as blueprint, sketch, damaged part, or description of part to be replaced, to determine dimensions and tolerance of piece to be machined, sequence of operation and tools, material, and machines required. Measures, marks, and scribes dimensions and reference points to lay out stock for machining (Lay-Out Worker (Mach. Shop)). Sets up and operates metal-removing machines such as lathe, milling machine, shaper or grinder, to machine parts to specifications.

Tool Machine Set-Up Operator

Positions and secures workpiece in holding device, such as chuck or collet, or on surface plate or worktable with such devices as vises, V-blocks, and angle plates, and uses handtools, such as files, scrapers, and wrenches, to fit and assemble parts to assemblies or mechanisms. Verifies dimensions and alinement with measuring instruments, such as micrometers, height gages, and gage blocks.

Tool Maker (Mach. Shop)

Analyzes variety of specifications, lays out metal stock, sets up and operates machine tools, and fits and assembles parts to make or repair cutting tools, jigs and fixtures, gages, or machinists' handtools, applying knowledge of tool design, shop mathematics, metal properties, and layout, machining, and assembly procedures: Studies specifications, such as blueprint, sketch, or verbal description, and plans sequence of operations. Measures, marks, and scribes metal stock to lay out workpieces for machining. Sets up and operates machine tools, such as lathe, milling machine, shaper, and grinder, to machine parts to specifications, and verifies conformance of machined parts to specifications.

Machine Operator (Any Ind.)

Sets up and operates metal fabricating machines, such as brakes, rolls, shears, saws, and heavy-duty presses to cut, bend, straighten, and form metal plates, sheets, and structural shapes as specified by blueprints, layout, and templates: Selects, positions and clamps stops, guides, and turntables. Turns hand-wheels to set pressure and depth of ram stroke, adjustment rolls, and speed of machine. Locates and marks bending or cutting lines and reference points onto workpiece, using rule, compass straightedge, or by tracing from templates. Positions workpiece manually or by hoist against stops and guides or alines layout marks with dies or cutting blades. Starts machine. Repositions workpiece and may change dies for multiple or successive passes. Inspects work, using rule, gages, and templates.

Medical Laboratory Technician

Performs routine tests in medical laboratory for use in treatment and diagnosis of disease: Prepares tissue samples for Pathologist (Medical Ser.). Takes blood samples. Executes such laboratory tests as urinalysis and blood counts. Makes qualitative chemical and biological analyses of body specimens, under supervision of Medical Technologist (Medical Ser.) or Laboratory Director.

Nurse, Licensed Practical (Medical Ser.)

Cares for ill, injured, convalescent, and handicapped persons in hospitals, clinics, private homes, sanitariums, and similar institutions: Takes and records temperature, blood pressure, and pulse and respiration rate. Dresses wounds, gives enemas, douches, alcohol rubs, and massages. Applies compresses, ice bags, and hot water bottles. Observes patients and reports adverse reactions to medical personnel in charge. Administers specified medication, and notes time and amount on patients' charts. Assembles and uses such equipment as catheters, tracheotomy tubes and oxygen suppliers. Performs routine laboratory work, such as urinalysis. Sterilizes equipment and supplies, using germicides, sterilizer, or autoclave. Prepares food trays and feeds patients. Records food and fluid intake and output. Bathes, dresses, and assists in walking and turning. Cleans rooms, makes beds, and answers patients' calls. Washes and dresses bodies of deceased persons. Must pass state board examination and be licensed. May assist in delivery, care and feeding of infants.

Carpenter (Const.)

Constructs, erects, installs, and repairs structures and fixtures of wood, plywood, and wallboard, using carpenter's handtools and power tools, and conforming to local building codes: Studies blueprints, sketches, or building plans for information pertaining to type of material required, such as lumber or fiberboard, and dimensions of structure or fixture to be fabricated. Selects specified type of lumber or other materials. Prepares layout, using rule, framing square, and calipers. Marks cutting and assembly lines on materials using pencil, chalk, and marking gage. Shapes materials to prescribed measurements, using saws, chisels, and planes. Assembles cut and shaped materials and fastens them together with nails, dowel pins, or glue. Verifies trueness of structure with plumb bob and carpenter's level. Erects framework for structures and lays subflooring. Builds stairs and lays out and installs partitions and bacinet work. Covers subfloor with building paper to keep out moisture and lays hardwood, parquet, and wood-strip-block floors by nailing floors to subfloor or cementing them to mastic or asphalt base.

Heavy Equipment Mechanic

Analyzes malfunctions and repairs, rebuilds, and maintains construction equipment, such as cranes, power shovels, scrapers, paving machines, motor graders, trench-digging machines, conveyors, bulldozers, dredges, pumps, compressors and pneumatic tools: Operates and inspects machines or equipment to diagnose defects.

Dismantles and reassembles equipment, using hoists and handtools. Examines parts for damage or excessive wear, using micrometers and gages. Replaces defective engines and subassemblies, such as transmissions. Tests overhauled equipment to insure operating efficiency. Welds broken parts and structural members. May direct workers engaged in cleaning parts and assisting with assembly and disassembly of equipment.

Electrical Technician

Applies electrical theory and related knowledge to test and modify developmental or operational electrical machinery and electrical control equipment and circuitry in industrial or commercial plants and laboratories: Assembles and tests experimental motor-control devices, switch panels, transformers, generator windings, solenoids, and other electrical equipment and components according to engineering data and knowledge of electrical principles.

Table 5: TWO YEAR GROWTH PROJECTION OF EMPLOYERS' LABOR NEEDS IN THE 13 HIGH NET DEMAND OCCUPATIONS

Clerical Occupations	2 Year Projection
Bookkeeper	6
Typist	18
Secretary	19
Total	43
Machine Trade Occupations	
Machinists	446
Tool Makers	91
Machine Set-Up Operators	52
Machine Operatives (Metal, Welder, etc.)	66
Total	589
Service Occupations	
Licensed Practical Nurses	30
Craft Occupations	
Carpenters	4
Heavy Equipment Mechanics	12
Total	16
Technical Occupations	
Electronic Data Processing	12
Electronic Technician	46
*Lab Technician (Radiology, etc.)	8
Total	58
Overall Total	678

*Certified Technicians

ADDENDUM

1. A number of interviews were also conducted with employers of workers in four other projected high demand occupations: Insurance Adjusters, Insurance Agents, Auto Mechanics and Account Collectors. Due to difficulties in finalizing employer interviews, however, they were dropped from this particular listing. Data pertaining to the contacts that were made and interviews that were completed for these two occupations are, therefore, not presented in Table 2.

2. The design and selection of the sample of establishments for participation in the interviewing phase of the study was intended to be an overview of employers which employed a large number of workers in the 13 high demand occupations. These firms were identified by using a Division of Employment Security (DES) computer print out of firms in the Worcester Labor Market Area.

3. Technically, less than 173 individual establishments were contacted during the employer survey since:

a. 60 establishments participated for more than one occupation; and

b. when the sample was drawn, a number of establishments were selected as employers of more than one high demand occupation.

4. Since multiple interviews were conducted in 60 establishments, the data contained in these tables do not necessarily refer to 99 separate establishments. There were in fact, only 64 different firms that actually participated in the interview survey.

Appendix A

QUESTIONNAIRE

NAME OF FIRM ______________________________

ADDRESS ______________________________

____

SIC CLASSIFICATION ______________________________

PERSON INTERVIEWED ______________________________
(Name)

____
(Title)

____
(Phone No.)

1) Total number of employees in establishment

	1977	1978	1979
A) Total			
B) Full-Time			
C) Part-Time			

2) Employment in specific occupations

Occupation	1978	1979	2 Yr. Projec.

3) What percentage of annual-job openings are due to: (growth/separation rate)

	1977	1978	1979
Occupation	Growth/Sep.	Growth/Sep.	Growth/Sep.
	/	/	/
	/	/	/
	/	/	/
	/	/	/
	/	/	/

4) Hourly wages in the occupation:

Occupation	Beginning Wage Rate	Maximum Wage

5) Hiring requirements for occupations being surveyed:

Occupation	Ed. Attainment	Prev. Exp.	Testing

6) Sources of supply for those employed in the occupation:

Occupation	DES (%)	High Schools (%)	Vocational Schools (%)	Comm. Colleges & Univ. (%)

7) If company trains its own work forces for the occupation:

Occupation	Per Year	Training Time	Type of Training (Classroom, etc.)

8) Can current employees in these occupations get promoted internally to other occupations?

Occupation	Types of Occupations to which promoted

9) Name(s) of Union(s) affiliated with employer:

10) How long does it take to fill an opening?

Occupation	1wk/or less	1-4 wks	5-12 wks	12 wks +

11) Do you generally hire persons in these occupations from:

Occupation	City of Worc.	Other areas of Ma.	Outside of Ma.

12) Would your company be willing to work in conjunction with the City Manager's Office of Employment and Training Administration to develop a training program tailored to your company's labor needs?

An Introduction to an Employer Survey

Prepared by:

Howard Wisniowski
Labor Markety Analyst
Hampden County Manpower Consortium
April 10, 1980

The purpose of this paper is to introduce those analysts, who are relatively new to survey work, to the essence of executing an employer survey. It is presented in outline form and for the most part self-explanatory addressing the types of questions and issues that are essential to this kind of work.

The paper is sub-divided into the following key sections:

I) Planning the Survey

II) Defining the Sample

III) The Questionnaire

IV) Analyzing the Data

V) Preparing the Report

I have tried to reflect my experiences and what I feel is important because I have learned quite a bit from them. I have always found that there is plenty of information of the wrong kind and when all the sifting and editing is complete, a survey always finds itself an important role in the planning process.

I. Planning the Survey

  A. What is it I want to know?
    1. Where are the information gaps?
    2. What are the problems and what do we know about them?
    3. What knowledge is needed to make sound predictions, reduce risks, and make intelligent decisions?
    4. What are the recommendations that should result from research?
  B. How much time do I have to complete the project?
    1. What are the deadlines?
    2. Are the deadlines flexible?
    3. Do I have enough time to get the information I want?
    4. Can I reduce the project into smaller parts that can be approached another time?
  C. What resources do I have at my disposal?
    1. What does the budget look like?
    2. Do I have professional support?
    3. Do I have clerical support?
    4. Is it all worth the cost?

D. What is the scope of my survey?
   1. How much can I realistically accomplish given my restraints?
   2. Is my scope too broad or too narrow?
   3. Given a suggested scope, will the information obtained be timely, usable, and acceptable to those who need it?
   4. Does the scope allow for addressing all the essential problems and questions?
   5. What are the issues it won't address?...
   6. Will that detract greatly from its usefulness?

E. What approach will I use? (See attachment)
   1. Mailed questionnaire: Pros and cons?
   2. Drop off-pick up questionnaire: Pros and cons?
   3. Group administered questionnaire: Pros and cons?
   4. Interview: Pros and cons?
   5. Telephone interview: Pros and cons?

II. Defining the Sample (Employer Survey)

A. What is the universe and what does it look like?
   1. How many employers are there (within SIC occupational group, etc.)?
   2. How many employees are there?
   3. What percent of the total labor force?
   4. How many small, medium and large firms? (Design your own strata).

B. Define the ideal sample
   1. How many firms in each category (SIC, DOT, etc.)?
   2. Can you get pertinent data on each firm?
      - name, address
      - telephone number
      - Standard Industrial Classification(s) (SIC)
      - number of employees
      - product or service
   3. From information available, can you construct a sample like or close to the "ideal sample"?

C. Construct actual sample
   1. Prepare firm list
   2. Develop identification codes (see example).

III. The Questionnaire

A. The design - be sure only "one way" to answer questions.
   1. Outline only what is needed informationally.

2. Ask for data that can be clearly remembered.
3. Ask for data readily available from records.
4. Data obtained must not involve generalizations.
5. The meaning of each question must be obvious, clear, and unambiguous.
6. Eliminate leading questions.
7. Omit questions raising personal bais.
8. The receiver should be able to see some relationship to own interests.
9. Limit as much as possible to obtaining facts and attitudes.
10. No questions containing more than one element.
11. Must be original and not dull or cute.
12. Must not require much work.
13. Avoid personal questions.

B. The Format

1. Must look interesting and fun to do.
2. Must have nice appearance and not look cheap.
3. Leave plenty of room for writing.
4. Avoid using words that will cause an unwanted emotional response.
5. Arrange questions in a logical sequence.
6. Use screening questions early.
7. Should not appear cluttered or difficult to understand.
8. Should only be long enough to cover its subject.

C. Testing the Questionnaire

1. Test several versions of the questionnaire on staff, etc.
2. Test using a "sample" of your sample and get more "outside" input.

D. The Cover Letter - Major Motivation

1. The appearance should be the best possible.
2. Should be short, friendly, and unambiguous, without being cute or dull.
3. The serious purpose should be covered in the first paragraph.
4. Pay attention to originality of expression--it is necessary.
5. Use letter head always.
6. To the extent feasible, every letter should have an "original" signature.

E. Increasing the Return

1. Include a statement in cover letter recognizing respondent's time as valuable and his "contribution" is important.
2. Include stamped, self-addressed envelope.
3. Use stamps, if possible, rather than a postage machine--demonstrates a more personal concern.
4. Follow-up with postcards or a telephone call-very important in that most respondents will need a little push.
5. Insure that technical assistance is available at convenient times.

IV. Analyzing the Data

A. Tabulation

1. Define required variables.
2. Construct dummy tables.
3. Put data into tables.

B. Organize

1. Edit raw data, prune out superfluous information.
2. Present data in table or graph format so that it can be easily read.
3. Review and list all major and minor questions.
4. Check and see if questions are still compatable with data. If not,:
    - restructure the question, or
    - reorganize or expand the data

C. Match Data With Other Sources (Try and get the "complete" story)

1. Survey is just a "snapshot"
2. How does data relate to:
    - historical trends
    - economic projections
    - business and economic developments
    - any other labor market reports
    - national and regional analyses, etc.

D. Discussion of questions

1. Take another look at the problems.
2. What are the major and minor questions?
3. Does it appear that the gathered facts will satisfy the problems and answer the questions?
4. Consult those who will use the analysis, and put forthcoming recommendations into action.

5. It is doubtful you will get everything you wish. (Be sure to make note of this in the report).

E. Generalization

1. Distill from overall picture only essential data.
2. Describe tables and graphs, etc. without becoming weighted with details that are interesting but not essential.
3. Summarize conclusions.
4. Outline recommendations.

V. Preparing the Report

A. Don't Forget Its Purpose

1. Increase knowledge and predictions.
2. Decrease risks of decisions.
3. Produce recommendations with practical applications.

B. Don't Forget Who's Using It

1. Tables, charts, and graphs should speak for themselves if well constructed. (and accompanied by a well-written narrative).
2. The narrative should flow and not become bogged down in detail.
3. Terminology should be limited to the report's readership (substitute short words for long ones).

C. Possible Pitfalls

1. Avoid a report thats long and wordy.
2. Use a judicious mixture of numbers, figures, and charts, just enough to substantiate findings.
3. Use simple declarative sentences.
4. Make the report enjoyable to read, not a substitute for a sleeping pill.
5. Employ K.I.S.S. (Keep It Simple Stupid).

VI. Use at the Hampden County Manpower Consortium.

1. Report will go to the Area Manpower Advisory Council (AMAC) via the Labor Market Advisory Committee (LMAC) with recommendations for training.
2. Upon approval, recommendation will go to the Plan Development Committee for course selection.
3. Outcome will be presented and justified in FY '81 Annual Plan upon review by HCMC staff.
4. Report will also go the Private Industry Council (PIC) via PIC Executive Committee for review.
5. PIC task force will review recommendation for Executive Committee and make its own recommendations.

6. PIC will select course recommendations based on Executive Committee's conclusions.
7. Outcome will be presented and justified in FY '81 Title VII Annual Plan upon review by HCMC staff.
8. Chamber will publish report for general distribution:
    - School Departments
    - Economic Development Offices
    - Other Chamber Offices, etc.

ADVANTAGES AND DISADVANTAGES OF SEVERAL FIELDWORK APPROACHES

	Approach	Advantages	Disadvantages
I.	Mailed Questionnaire	Can reach large samples at relatively low cost.	Difficult to achieve 100 percent response (25% is par).
		All materials can be prepared in advance and distributed according to schedule.	Cover letter and follow-up provide the only motivation.
		Confidentiality is assured.	Requires carefully written instructions to respondents and/or the availability of technical assistance.
II.	Drop off-pick up questionnaire	Personal contacts aid motivation.	May require a large number of fieldworkers.
		High response can be achieved with a few days.	Travel time and expenses run high.
		Personnel need only minimal training.	Requires carefully written instructions.
		Personnel costs are relatively low.	
		Most materials can be prepared in advance.	
		Little record-keeping by fieldworkers.	
III.	Group Administered Questionnaire	Low cost	Very limited use
		Few staff needed	Must be used with the population.
			Restricted by availability of respondents in groups.

Approaches	Advantages	Disadvantages
IV. Interview	Personal contacts to motivate respondents.	Requires highly trained fieldworkers.
	High response can usually be attained.	Cost for fieldworkers and training are high.
	Provides opportunity to probe respondents to gain extensive data.	Travel expense and contact time can be high.
	Smaller sample can be used.	Usually requires a good deal of respondent's time.
		Substantial record-keeping by fieldworkers is necessary.
V. Telephone Interview	Few staff needed	Very limited use
	No travel costs	Easily biased by the vagaries of telephone subscriptions and services.
	Can reach a large sample at a relatively low cost.	Difficult to motivate respondents.
		Can require a good deal of respondent's time.
		Contact time can be high.

SAMPLE

1980 EMPLOYER SURVEY CODING SYSTEM

34	6	072
MAJOR SIC GROUPINGS	FIRM SIZE STRATA: 1 = 4 to 49 employees 2 = 50 to 99 3 = 100 to 249 4 = 250 to 499 5 = 500 to 999 6 = 1000 plus	NUMBERICAL ASSIGNMENT TO FIRMS IN THEIR ALPHABETICAL SIC SEQUENCE

26 = Paper and allied industries
27 = Printing, publishing and allied industries
34 = Fabricated metal products
35 = Machinery, except electronic
36 = Electrical and electronic machinery, equipment and supplies
38 = Measuring, analyzing, and controlling instruments
394 = Toys, amusement, sporting and athletic goods

Section Four: DISCUSSION OF EMPLOYER SURVEY CONFERENCES

Edward Meehan
Northeastern University

The speakers who preceeded me today addressed a large number of practical concerns in designing and operating an employer based survey. From a practioners point of view the prime concern should be meeting ones immediate informational needs, given the available resources. We would like to take this opportunity to illustrate the potential value of employer based surveys for answering our academic concerns. As such we would not only view these surveys as a practioner but also as someone who has taught labor economics courses. They are tools to expand and test our theoretical knowledge. In particular, we would like to discuss the relevance of employer based surveys for expanding our body of knowledge concerning identifying unemployment by type and dual labor market theory.

As labor market economists we realize there are various causes for unemployment. We would like to be able to identify the absolute and relative amount of each type among all those unemployed. We would then know what types of remedial actions, and in what mix, would be more likely to reduce overall unemployment. Generally unemployment is catagorized as: cyclical, frictional, seasonal or structural. Structural unemployment is thought to exist when some person is unemployed while unfilled openings exist in some occupation other than that for which this person is qualified to fill. Although we seem sure that this type of unemployment exists, we are generally not able to quantify the extent to which openings by occupation exist. Although our household based surveys indicate the previous occupational attachment of the unemployed they don't measure openings that establishment have. A survey of establishments should be able to provide that information which is essential to measuring with any degree of precision the extent of structural unemployment.

Labor market economists also often describe the labor market as being segmented. Dual labor market theory describes jobs as falling into either the primary or the secondary labor market. The primary labor market is comprised of jobs which generally required some skill on the part of the person being hired, offer training, advancement within the firm, relatively high wages, union representation, and stable employment. Conversely the secondary labor market consists of those jobs which generally don't require a great deal of skill for entry, offer little or no training, no internal ladders, relatively low wages, are non-union shops, and may offer only unstable or seasonal employment. Jobs which have all or some of the combination of these latter traits, in some varying relative degree, may fall into what is termed the secondary labor market. What this means is that to make this determination a large amount of detailed information concerning an occupation is needed. One might gather through an employer survey such information as: What were the skills of the person hired into an occupation, what wage was that person hired in at and what did they receive at some later time, how long did their training period last (if any), how long did they remain in that position, what position did they move to and other such information. With this type of information one could then begin to assess the extent to which segmented labor markets exist. At this point that amount of detailed information is often not available.

The preceeding discussion gives only two examples of the many theoretical questions concerning labor markets and their operations which can only be properly addressed with information that may only be found through employer based surveys.

It should also be noted that studying these issues should not be thought of only as academic exercises. Their importance to the practitioner is easily demonstrated. In the former case, one must know one faces structural unemployment (and its extent) before designing remedial measures. The existence of a dual labor market would influence our choice of training occuptions. The traits of the secondary labor market jobs are those we generally find undesirable for jobs we would place clients in. Although these practical issues may be foremost in importance, it is hoped this discussion points out that information from employer based surveys is needed to answer some of the questions labor market economists have long pondered.

Robert Vinson
Massachusetts Department of Manpower Development

The two conferences provided a valuable form for an exchange of information and ideas on the various uses of employer surveys in helping prime sponsors effectively plan employment and training programs. As Andy Sum indicated, employer surveys should be viewed as an important mechanism for filling labor market information gaps. In particular, the collection of data related to employer hiring requirements, training and promotion policy, wage information and identification of "ports of entry", is essential in developing a service delivery mix which is capable of addressing local employer needs.

In his remarks, Paul Harrington took great pains to distinguish between an analytical survey designed to produce precise estimates of assorted labor market variables and an operational survey intended to help the prime sponsor improve some combination of the planning, job development, job placement and marketing functions. It is Mr. Harrington's view as well as my own, that an operational oriented survey is definitely the way the prime sponsors should go. This type of effort can have a relatively quick payback to the prime sponsor in providing input into improving the service delivery system and does not require the degree of technical or statistical sophistication necessary to conduct an analytical survey. This type of effort is best conducted by the state SESA's and the Bureau of Labor Statistics because of their more extensive research capabilities. Mr. Harrington also provided some very useful suggestions regarding measurable survey concepts, sample design and data collection techniques.

A quick review of several specific surveys undertaken by prime sponsors reveals that numerous applications have been made throughout the region. The survey work that was done by the University of New Hampshire was primarily concerned with determining employer attitudes towards CETA and identifying appropriate industries and firms for training. The information obtained was also intended to help clarify the degree of emphasis that should be placed upon OJT vs. classroom training in providing occupation specific skills.

In contrast to the New Hampshire survey the employer contacts initiated in Penobscot County were viewed principally as a marketing effort by the prime sponsor. While information on hiring standards practices and expectations were obtained, the intent of this survey was to improve the impact of CETA and communicate to local employers that the prime sponsor could assist local employers in meeting their manpower requirements . Based on this objective, the Penobscot prime sponsor felt that this effort was most successful.

In summary, it is clear that a viable role exists for employer surveys. In a time of dwindling resources, however, it behooves prime sponsors to define their survey goals clearly and concisely. In this manner, local employer surveys can be conducted which fill labor market information gaps, are operational rather than analytical in scope and provide input into improving the delivery of manpower services at the prime sponsor level.